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Community Noise Assessment Manual
Social Survey Workbook

Wyle Research
El Segundo, CA

Prepared for

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COMMUNITY NOISE ASSESSMENT MANUAL

SOCIAL SURVEY WORKBOOK

July 1981

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Noise Abatement and Control
Washington, D.C. 20460

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16. ABSTRACT

This report was prepared by EPA, Office of Noise Abatement and Control, in support of its function to provide technical assistance to communities. It is one of nine which comprises the Community Noise Assessment Manual. The Manual provides a comprehensive and computerized system for assessing the noise problems of a community and then planning a noise control strategy for its abatement. This report is a workbook which provides specific instructions for the design and administration of a social survey of community attitudes toward noise. There are two separately bound volumes to the workbook. The first provides detailed instructions for survey design and management. The second volume is a set of appendices providing forms and special handbooks for administering the survey. The major areas of the workbook are: an attitudinal questionnaire, sample selection procedures, data processing procedures, data processing procedures and techniques for analyzing the data.

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FOREWORD

The U.S. Environmental Protection Agency has developed a "Community Noise Assessment Manual" to provide local governments detailed guidelines in developing a comprehensive noise control program. This manual includes the following documents:

- Acoustical Survey
- Social Survey Workbook
- Community Noise Strategy Guidelines

This specific document – the second referenced above – is a workbook which provides specific instruction for the design and administration of a social survey of community attitudes toward noise. The reader is referred to the U.S. Environmental Protection Agency's Office of Noise Abatement and Control for assistance in analysis and interpretation of this survey data and for information concerning the other referenced publications.

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The workbook was written by Dr. Ned Levine and Ms. Maria Iosue of I.S,S.R. The basic noise zone concepts were developed by Mr. Steven Skale and Mr. Louis Sutherland of Wyle Research. The sampling framework was developed by Dr. Jay Sumner and Ms. Rita Englehardt of I.S.S.R.

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CHAPTER 1

Introduction

In order for local government officials to effectively design and administer a comprehensive noise management program, they must be equipped with a complete inventory of decision-making tools. These tools include physical monitoring surveys, complaint activity records, public hearings, and available criteria for noise effects on people. This document provides an additional and extremely vital tool, a procedure for implementing a survey of people's attitudes toward noise.

Community attitudes regarding noise will vary widely among communities and a social survey is the means for obtaining a balanced and reliable estimate of these attitudes. In contrast to complaint activity and public hearings which provide city personnel with only a limited picture of public opinion, a social survey can be structured to ensure the gathering of opinions which are representative of the entire community.

An attitudinal assessment of community noise has seldom been fully utilized by local government officials due, in part, to the lack of a comprehensive questionnaire and implementation program. To fill this void, the U.S. Environmental Protection Agency has sponsored the development of this "Social Survey Workbook" for use by local governments in developing a comprehensive noise abatement program. This workbook provides complete detailed instructions for the design and implementation of a social survey. There are two separately bound volumes to the workbook. The first volume provides detailed instructions for survey design and management. The second volume is a set of appendices providing forms and special handbooks for field and office personnel who will administer the survey.

The workbook is designed to be utilized by officials from many local government departments, including elected officials, administrators, planners, enforcement officers, environmental personnel, health personnel, financial managers and public information personnel. This workbook establishes a program that is totally self-administered by the local government, thus permitting the development of a program uniquely tailored to a city's own needs.

The "heart" of the workbook is an attitudinal questionnaire to be administered to city residents. It was developed through a detailed study of virtually all previous social surveys of noise related attitudes. In order to meet the diverse needs of these potential users, the questionnaire is designed to provide a brief and straightforward instrument for gauging a variety of noise related attitudes and responses in the community. The major subject areas investigated by the social survey are:

- Perceptions of urban and environmental problems.
- Evaluation of public services and environmental programs, including noise control.
- The effects of noise on residents' health and welfare.
- Identification of the specific problem sources of noise in the community.
- Identification of measures taken to reduce noise in the community.
- Support for noise control in the community.

The information obtained through implementation of this survey will permit an assessment of needs for the citizens and a basis for design of a noise abatement program. Fundamental areas encompassed by this assessment include:

Identification of Specific Needs – The social survey will assess the impact of noise on residents' home environment. By asking individuals what types of noise impact them and what effect this has on them, it becomes possible to identify specific needs of various sections of the community. An analysis of a city's noise environment based on physical data – noise measurements, traffic projections, and building construction – does not truly identify the impact of noise on individual citizens.

Identify Priorities for Action – The design of a noise abatement program is directed toward improving the health and welfare of a city's residents. This requires a knowledge of the severity of a city's noise environment and the nature of the specific noise sources which comprise this environment. Based on data obtained from a social survey, these sources can be identified and their severity ranked accordingly. Using this and supporting information gained through noise measurements, priorities for noise abatement action will be established.

Establish a Basis for Noise Abatement Action – The social survey will identify what types of noise sources are not acceptable in the community and, therefore, should be abated. In addition, a survey will indicate the extent of public support for a noise control program. It is essential for the city administration to know that the public is behind them in proposing any kind of legislation or other noise control action. In addition, a survey will establish the community's willingness to pay for noise reduction. Without a survey, it is very difficult for municipal officials to know that they have a "constituency" which will support such actions.

Obtain Additional Information from the Survey – The survey also allows for the identification of major environmental problems in addition to noise, including a limited evaluation of public services. This information is useful for all types of community planning and will serve as the basis for developing a general set of urban priorities. The survey will allow the city to place noise in a broader context of urban growth and change. Generally, noise as a problem is related to the development of other problems: traffic congestion, deterioration of neighborhoods, high unemployment rates, air pollution, and so forth. It becomes important to understand these relationships and to see the reduction of noise as part of a broader urban strategy. The questionnaire and the analysis methods focus on some of these interrelationships and allow city officials to gain a unique perspective into the operation of the city and the manner in which residents are impacted.

This workbook – including questionnaire, administrative procedures, training procedures and survey data analysis techniques – was field tested in Allentown, Pennsylvania, during 1977 and 1978. This program was administered by the Allentown

Community Development Department with consulting assistance provided by the U.S. Environmental Protection Agency. Utilizing the workbook procedures, a survey team prepared a social sample carefully designed to represent an unbiased cross-section of the community and administered the questionnaire to city residents. Survey data were subsequently analyzed by computer methods and used as a basis in developing a comprehensive noise abatement program. Following the survey, revisions were made to the workbook reflecting this field experience. Thus, the methodology represents the culmination of extensive research and practical experience on the type of data required for a comprehensive community noise survey.

Implementation of the social survey set forth in this workbook will involve a detailed examination of the city and the intricate patterns of residential development. Areas within a city differ from one another in terms of income levels, type of housing, and types of people who live there. As this social survey study is enacted, the city research team will become aware of the subtle differences that differentiate areas of the city from one another, and the manner in which these differences influence noise impact.

The research team should approach this project in a spirit of discovery, for the process of examination and understanding underlies any solutions to practical problems. Noise, after all, is produced by people as they live their lives and is intrinsically interwoven in the patterns of their lives. Studying noise, therefore, is a way of understanding the city and its people. This is the basic premise which has guided the production of this workbook.

CHAPTER 2

The Social Survey Design

2.0 INTRODUCTION

The purpose of this workbook is to provide a standardized survey technique for assessing community attitudes toward noise. The survey is a self-contained operation; however, it is designed to be compatible with noise survey procedures described in the Community Noise Assessment Manual for Acoustical Surveys. The survey will give feedback to the community and its leaders on the impact of noise and the public willingness to support a noise control program.

The procedures outlined in this manual have been designed to standardize survey implementation and data analysis between communities. Careful adherence to the instructions will assure the eventual correlation of survey results among cities. In this way, the data will not only be useful for your city, but will add to a general pool of knowledge about community attitudes toward noise.

2.1 Guidelines for Survey Administration

Administration of a social survey is a complex technical operation, involving interaction with many people and the execution of detailed procedures. However, city personnel will gain professional experience and develop new insights into the community in the implementation of this program.

Survey implementation is guided by two basic values of objectivity and ethical responsibility. Objectivity is ensured by conducting the survey in a scientific and unbiased manner. Ethical responsibility, on the other hand, guarantees the rights of the individuals interviewed in the study, the respondents, to confidentiality and to respectful and professional treatment. These ethical issues are discussed in more detail in Section 4.3.1 and are the guiding principles of survey administration.

Implementation of a social survey is an exercise in management. In addition to following the rules and guidelines in the manual, city officials must exercise judgment and "common sense." It is impossible to define every procedure that will be used to implement a study for many different tasks and complex human interactions are involved. Be flexible in responding to the various situations, and be prepared to think out problems as they appear. Assume an alert management role at all times to ensure that the survey is carried out correctly and quickly. This will guarantee that the results will be as accurate and as useful as possible.

2.2 Procedural Overview

There are two major stages to the study: (1) Sample Selection, and (2) Survey Implementation. The following procedures will be carried out:

1. Sample Selection
    a. Stratification: Noise Zones and Areas
    b. Cluster Selection
    c. Listing Households
    d. Household Selection
    e. Preparation of Cluster Kits and Letters of Introduction
2. Implementation of the Survey
    a. Selection of Field Personnel
    b. Training of Field Personnel
    c. Sending of Introductory Letters to Selected Households
    d. Allocating Household Assignments to Interviewers
    e. Management of Field Operations (record keeping, interviewer instructions, etc.)
    f. Sorting of Questionnaires for Editing and Coding
    g. Editing of Questionnaires
    h. Validating of Questionnaires
    i. Coding of Questionnaires
    j. Preparation of Data for Keypunching

In this chapter, an overview of these procedures is presented. Next, the major planning considerations are discussed. Finally, a complete list of the materials required to conduct the study is given. Chapter 3 of the manual provides the detailed instructions for sample selection, while Chapter 4 outlines the implementation of the survey.

2.3 Overview of Sample Selection

2.3.1 Accuracy of the Sample

A sample is a selection of individuals from a larger population. A sample is selected because canvassing everyone in the population would be very expensive and time-consuming. A relatively small number of households – 700 (and one adult from each) -- will be selected. Since surveys involve a degree of "non-response," this sample size is expected to provide at least 500 completed interviews. The logic of the sample is that the selected households collectively will represent the population as a whole. Each household in the population has an equal chance or probability of being chosen for interviewing. Also, by taking care to geographically disperse the sample over the city, the distribution of household characteristics in the sample will approximate the distribution of the characteristics in the population as a whole. That is, the sampled households will "more or less" represent the entire population for major characteristics such as, for example, race or the percentage of apartment dwellers. The phrase "more or less" is used because, in practice, the actual distribution of individuals in the sample will rarely fit exactly the distribution of individuals in the population, but the overall discrepancy will be small. In this design, the sample should give only about a 5 percent discrepancy. That is, you will know with a ±5 percent range what your community as a whole feels about noise.

2.3.2 The Sample Design

Stratification is the first step of the sample design. It is a procedure which divides the population into relatively internally homogeneous groups in order to reduce sampling error. In this sample design, the population of the city will be stratefied twice: first, according to noise zones, which roughly define homogeneous noise environments; and second, according to geographical areas, which reflect similar social and residential patterns.

The second step of the sample design is cluster sampling. This refers to the selection of city blocks. We call them clusters because each block is actually a cluster of households. The third step of the sample design is the listing of each and every household in the selected clusters. The fourth step of the sample design is household selection. Approximately seven households from each of the sampled clusters will be chosen for interviewing using the technique of systematic random selection. Before sending interviewers into the field to administer questionnaires, a "kit" of materials must be prepared for each of the selected clusters. Finally, an introductory letter will be prepared for mailing to each of the selected households. This will give advance notice to the residents that an interviewer will contact the household.

2.4 Overview of Survey Implementation

Survey administration is the process of interviewing the respondents who have been selected by the sample. While this sounds simple, it actually involves a great deal of administration and management. First, field personnel must be selected. There are two types: interviewers, and office personnel. Second, these personnal must be trained in the use of the questionnaire, if they are interviewers, and the appropriate office procedures, if they are office personnel. Third, the interviewers will be assigned to households at which they will try to obtain interviews from selected respondents. Fourth, this whole procedure must be managed throughout the duration of the study. Fifth, as the completed questionnaires are returned, a record-keeping (logging) procedure is enacted so that there is accurate information about the completions in each cluster, and an accurate inventory of each interviewer's assignments. Next, the questionnaires are then sorted for editing and coding. They are then edited to assess whether the correct respondent has been interviewed. Some of these questionnaires are then chosen for validation in order to maintain a high quality of interviewing. Then all edited questionnaires are coded, using a standardized coding system in order to prepare the questionnaires for keypunching. Finally, the completed data deck is analyzed using a standardized computer program available from EPA.

2.5 Planning for the Survey

As can be seen, administering a survey involves both time and effort. However, let's start at the beginning. The first task in successfully carrying out the survey is planning. This is a critical part of an effective survey implementation, and it involves several points: the timing of the survey, the organization of resources and senior staff, and the setting up of a timetable.

2.5.1 Timing of the Survey

Choosing an appropriate time of the year to implement the survey is an important decision. The first consideration is weather. Bad weather can considerably slow down the program as was demonstrated in the first test of the survey in Allentown, Pennsylvania. Because the study was conducted in the winter in Allentown, it took at least 1 month longer to complete the interviewing process. The costs of extending a survey can be considerable, so avoid the winter season. On the other hand, conducting a survey in the summer can pose other problems. Because many people are vacationing during this season, more contact attempts are needed in order to reach respondents. This may also mean considerable time as well as economic costs. Therefore, the ideal time to implement the survey would be the early fall or the late spring.

There are, however, two additional considerations. The first is holiday seasons. Response rates will be low during these times since people feel rushed and busy. It is best not to schedule the survey around these times. The second factor is noise impact. Noise itself varies throughout the year, depending on the weather conditions of an area. For example, in colder areas, there is generally less noise impact on residents in winter since they tend to sleep with windows shut. As a general rule, the warmer periods are better for assessing the impact of noise.

2.5.2 Organizing Resources: Space and Budget

To have sufficient space for handling the survey operations, obtain two large rooms, or three or four small rooms. It will be necessary to comfortably house the staff to perform editing, validating, and coding operations all at the same time. It is even a good idea to have enough space to give all the members of the staff places to keep their materials. Enough space should be available for storing questionnaires and for keeping them organized as they proceed through the operations. A system for storing which proved efficient during the test in Allentown was to use envelopes and large boxes. The questionnaires were first kept in envelopes, grouped by clusters. As they were returned and passed through the various office procedures, they would be moved from one large box to another. Finally, they were returned to the original envelopes. You will need storage for all the other materials as well. Remember that for reasons of confidentiality, you should ensure the security of some of the survey items, and so be able to lock them up at night.

You should also have access to at least two telephones. One of these phones must be kept open for contact with interviewers and for use by the Field Director, while the other will be used for validation. Access to any additional phones would be useful.

Besides space and telephone costs, there will be the following expenses. First, there are printing costs for most of the forms, labels, as well as the questionnaires, which are contained in the Appendices. Second, there are funds for listers and interviewers. In some cases, you will be able to obtain volunteers for these jobs, but in other cases, you will have to hire workers. In either case, since both these jobs involve travel, a car is almost a necessity and you will have to budget travel costs. Third, there are costs for stationery, postage, and secretarial help. Finally, there may be unforeseen expenses for special stationery costs, special maps, photocopying, extra travel expenses, etc.

2.5.3 Organizing Senior Staff

The personnel available will vary from community to community. Therefore, the discussion of allocating staff and defining roles will be a general one and the organization will be left to you.

It is strongly recommended that two senior staff be responsible for implementing the survey and that they be given assistants. One of the senior staff should be the Field Director and the other should be the Coding Director. The Field Director should be responsible for all field operations — sample selection, the preparation of questionnaires, the training of listers, the administration of the listing operations, the training of interviewers, the assigning of interviewers to clusters and the administration of field procedures, the logging of returned questionnaires, the editing of questionnaires, and the validation of some questionnaires. The Coding Director should be responsible for all coding operations — the logging of edited questionnaires, the training of coders, the supervision of coders, quality control of coding, and the preparation for keypunching. In practice, however, these two roles are not so clearly distinguished. It is essential that both senior staff work closely with one another, know each other's tasks, and maintain a high degree of coordination. Continual communication between these staff members will make operations more effective and efficient.

The people selected as senior staff should have certain qualities. First, they should enjoy handling complex tasks since the survey includes a multitude of different tasks being carried out simultaneously. Second, they should be capable of handling unexpected situations. These are bound to occur despite the definition of systematic rules and procedures. Third, both senior staff should enjoy managing people. Much of the survey operation is a task in effective management — coordinating people and their responsibilities and intervening when difficulties arise. Hence, experience in management is a good prerequisite.

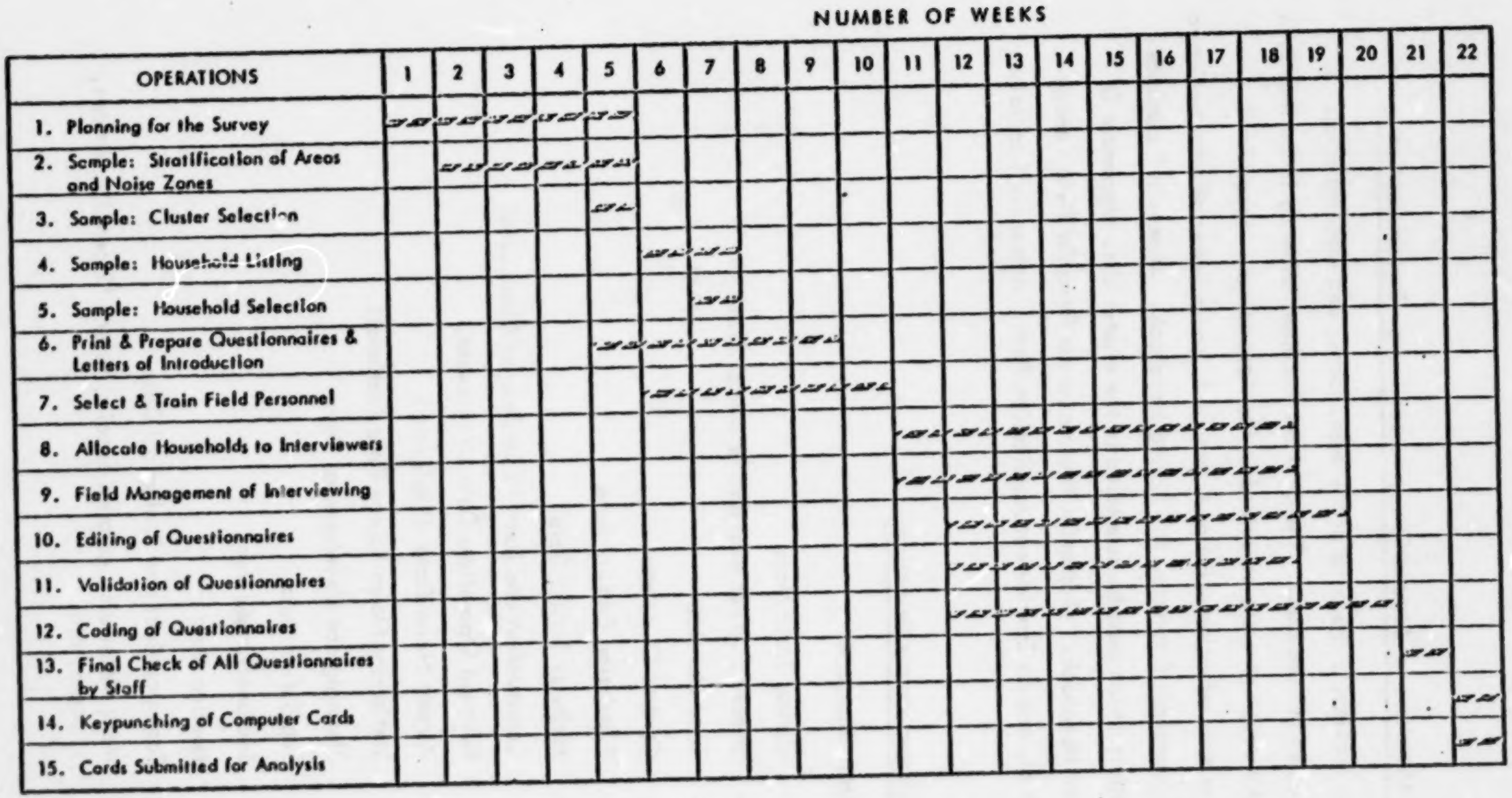
Assistants to the senior staff will be extremely helpful during the first few weeks of interviewing when it will be necessary to coordinate multiple tasks. Assistants will also be helpful during the periods when the staff are preparing kits for listers or for interviewers. Having assistants will make operations more efficient, keep mistakes at a minimum, and prevent a backlog from developing. These are crucial issues for maintaining tight control and ensuring a high quality of information-gathering.

2.5.4 Setting Up a Timetable

Once you have read through the manual and organized the various resources and personnel that are available, try to envision what each of the tasks involves and determine a tentative timetable of operations. This will make it easier to be prepared when the time comes to begin the next task. For example, personnel must be ready to do their work, which means they must be adequately trained, and efficient training sessions require planning and preparation of materials. By using the timetable as a guide, it is possible to anticipate the upcoming tasks and be fully equipped and staffed to carry them out.

Figure 2.5-1 presents a model timetable. In the model, the entire survey operation takes 5 months. However, you may find that some tasks will take less time while others will take more. As far as organizing materials, the sample selection items should be obtained immediately, and next the materials for the listers. The questionnaires and other materials for field operations should be prepared while the sample is being taken. After organizing a senior staff, the next personnel consideration is organizing a pool of about five listers who will be needed for about 2 weeks of work. Since it takes time to recruit interviewers, begin the process as soon as possible. A pool of 30 to 40 should make it possible to finish the operations within 8 to 10 weeks. The editor, validator, and coders can be chosen from this pool. Be sure to have secretarial assistance available.

A timetable will help you adjust the flow of operations as well as give a sense of structure and control over the research system. However, it will certainly be necessary to operate with a large measure of flexibility since survey work involves many unforeseen situations.



	NUMBER OF WEEKS																					
OPERATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. Planning for the Survey	▨	▨	▨	▨	▨																	
2. Sample: Stratification of Areas and Noise Zones		▨	▨	▨	▨																	
3. Sample: Cluster Selection					▨																	
4. Sample: Household Listing						▨	▨															
5. Sample: Household Selection							▨															
6. Print & Prepare Questionnaires & Letters of Introduction					▨	▨	▨	▨	▨													
7. Select & Train Field Personnel						▨	▨	▨	▨	▨												
8. Allocate Households to Interviewers											▨	▨	▨	▨	▨	▨	▨	▨				
9. Field Management of Interviewing											▨	▨	▨	▨	▨	▨	▨	▨				
10. Editing of Questionnaires												▨	▨	▨	▨	▨	▨	▨	▨			
11. Validation of Questionnaires												▨	▨	▨	▨	▨	▨	▨				
12. Coding of Questionnaires												▨	▨	▨	▨	▨	▨	▨	▨	▨		
13. Final Check of All Questionnaires by Staff																					▨	
14. Keypunching of Computer Cards																						▨
15. Cards Submitted for Analysis																						▨

Figure 2.5-1. A Model Timetable for Survey Operations

2.6 Checklist of Materials for Sample Selection and Survey Implementation

The following provides a checklist of the data, forms, and work materials which are required to carry out the study. The data are discussed in detail in Section 3.1. Copies of all forms — A through M — are contained in the Appendices. Appendix B contains the forms for sample selection — Forms A through I, and a Letter of Introduction to Selected Households. Appendix E contains the Listing Handbook. Appendix F contains the questionnaire materials which must be assembled in the cluster kits. Appendix G contains the Interviewer Handbook. Appendix H contains the forms for field management — Forms J through M, and an Interviewer Application Form. Appendix I contains the Coding Handbook.

A. Materials for Sample Selection

1. Stratification

- Census Tract Maps
- Detailed Street Map and/or Aerial Photo
- Land Use Data
- Central City Data
- Population Density Data
- Highway Traffic Data
- Construction and Demolition Data at Block Level
- Railroad Operations Data (if relevant)
- Airport Noise Data (if relevant)
- Stationary Noise Source Data (optional)
- Planning and Development Data
- Population Data
- Socioeconomic Data
- Housing Data
- Topographical and Ecological Data
- Work Materials: colored pencils, ruler, #2 pencils, erasers, paper, etc.

2. Cluster Selection

- Census Block Statistics
- Residential Construction and Demolition Data
- 150 copies Form A
- 2 copies Form B (including continuation pages)
- 2 copies Form C (including continuation pages)

3. Listing Households

- 120 copies Form D
- 120 copies Form E
- 120 copies Form F (F-1 through F-7)
- 50 copies Form F (F-8 through F-14)
- 2 copies Form G (including continuation pages)
- 10 copies Listing Handbook
- Work Materials: clipboards, pencils, etc.

4. Household Selection

- 120 copies Form H (including continuation pages)

5. Preparation of Kits and Letters of Introduction

- 120 copies Form I
- 1000 Questionnaires
- 50 sets of Respondent Handcards
- 1000 gummed Respondent Selection Labels
- 1000 Informed Consent Statements
- 1000 Call-Back Cards
- 1000 Thank-You Cards
- 800 Letters of Introduction to Selected Households
- Work Materials: clipboards, pencils, etc.

B. Materials for Survey Implementation

1. Selection of Field Personnel
   - 75 Interviewer Applications
2. Training of Field Personnel
   - 60 Interviewer Handbooks
3. Allocating Household Assignments to Interviewers
   - 150 copies Form J
   - 150 copies Form K
4. Validating of Questionnaires
   - 500 copies Form L
5. Coding of Questionnaires
   - 150 copies Form M
   - 8 Coding Handbooks

CHAPTER 3

Sample Selection

3.0 INTRODUCTION

This chapter outlines the detailed procedures for selecting a sample of approximately 700 households from the community. The sample procedures have been designed to serve a city with a population size varying between 50,000 and 150,000 people. If the population of the city is smaller than 50,000 or much greater than 150,000, then this design will have to be modified. Contact your regional Noise Abatement and Control Office of the U.S. Environmental Protection Agency for further guidance. Appendix A lists the regional offices.

To make the best use of this chapter, first skim it entirely. Then carefully read each section in order.

3.1 Information Required for Sample Selection

This section lists the information required for the sample design and suggests how to obtain it. Make every effort to gather complete and accurate data; otherwise, you will be unable to take the sample correctly. How to use the information is discussed in the subsequent sections.

3.1.1 Data for Defining Noise Zones

1. Maps – Obtain census tract maps from the most recent census. See Section 3.1.3 for a discussion of how to obtain data from the Census Bureau. More detailed street maps as well as aerial photos will be helpful.
2. Land Use Data – This will normally take the form of maps of existing land use which are usually available from municipal or county planning or engineering offices. The information should describe the existing land use in all portions of the city. (Note that while land use zoning maps may be used as guides, they may not reflect actual land use since some areas may have undergone development or zoning changes.)

3. Central City Data – Contact local sources for general information about land use, land values, activities, business interests, public transportation systems, and public services in the central area of the city. Discuss the characteristics of the central area with members of local offices to help distinguish a Central Business District from peripheral areas.

4. Population Density Data – From the local urban planning office, obtain as detailed information as possible for population densities throughout the city. The data should indicate density as the number of people per square mile (or per square kilometer or per acre). If this numerical population data is not available, try to obtain information based on qualitative statements of density, such as "low," "medium," etc. This type of information may be prepared in map form.

5. Highway Traffic Data – Obtain Average Daily Traffic (ADT) counts for all roadways and limited access highways in the city. (ADT is the average number of vehicles that pass a given point traveling either direction in one day.) This data is typically available in map form and Figure 3.2-3 (Section 3.2) illustrates an example. ADT counts are usually available for all types of roads from municipal transportation, highway, engineering or planning offices. If these sources do not have the data, contact similar county or state departments. (Note that ADT counts are usually not conducted for all streets with traffic flows less than 6,000 vehicles per day. For the purposes of this survey, however, it will only be necessary to identify those streets in this range for which ADT data are available.)

6. Construction and Demolition Data – From the planning office obtain the most complete data on construction and demolition, including information about new blocks and about housing changes within a block. The data should refer to industrial and commercial areas, any previously vacant areas, and to residential areas.

7. Railroad Operations Data (required for communities with railroads) – For each local through-route in the city, obtain the average number of day and night operations; that is, the average number of times trains travel on a route in the daytime (7AM to 10PM) and in the nighttime (10PM to 7AM). This information is usually available from the railroad company Linemaster, Dispatcher, Superintendent of Line Operations, or Engineering Department. (Information about operations at railroad yards is discussed in item 9. below.)

8. Airport Noise Data (required for communities with airports) – Obtain noise level contours for local military, commercial, and general aviation airports. This may include airports located near but not actually within the city if there is noise influence extending into the community. The contours may be in terms of any of the four common methods, listed below, for describing the levels of noise that result from airport operations.

   Day-Night Average Sound Level (L_{dn})
   Noise Exposure Forecast (NEF)
   Community Noise Equivalent Level (CNEL, used only in California)
   Composite Noise Rating (CNR).

   If more than one system of contours is available for an airport, the L_{dn} contours are preferred, followed by NEF and CNEL. Use CNR contours only if these are the only ones available for a particular airport. The same system need not be used for all airports influencing the study area.

   Noise contours will be available for any airport which has been required by the Federal Government to prepare an Environmental Impact Statement (EIS). Contours will not be available for some small general aviation airports for which an EIS has not been required. These small airports will have minimal noise influence and it will not be necessary to obtain noise data for them. Airport noise contours for civil airports can usually be obtained from airport planning agencies, airport managers, municipal planning departments, or regional Federal Aviation Administration (FAA) offices. Contours for military airports are normally available through the office of the facility commander. A typical set of airport noise contours is shown in Figure 3.2-2 (Section 3.2).

9. Stationary Noise Source Data (optional) – Obtain information that will allow you to identify and list stationary noise sources which have a significant noise influence in a residential area. Examples of such sources are: refineries, power plants, major construction sites, sewage plants, race tracks, sports stadiums, or railroad yards. A minimum of a few blocks must be affected by the noise source and it must be a more or less permanent one – that is, in the area for approximately a 1-year period. Municipal law enforcement, environment or health and safety departments, newspapers, or citizens groups may have information on stationary noise sources which have these characteristics.

3.1.2 Data for Defining Areas

1. Maps – Obtain census tract maps from the most recent census.

2. Planning and Development Data – Contact the planning office or community development office to determine whether various geographical areas have been delineated as part of a planning or development program. If such areas have been established, you will probably want to incorporate them into the sample design, in which case the data described in items 3. through 6. below may not be required.

3. Population Data – Besides information on population density, gather data about the distribution of different ethnic or racial groups, as well as demographic groupings of age, sex, and marital status.

4. Socioeconomic Data – Obtain information about the distribution of high versus low income groups, of different educational groups, and of occupational groups.

5. Housing Data – Obtain information which describes the land use patterns in residential areas. This should indicate whether areas are owner-occupied versus renter-occupied, and whether single or multiple dwellings predominate.

6. Topographical and Ecological Data – Obtain aerial photos and detailed maps of the city which clearly delineate the natural characteristics of the community, such as lakes, rivers, hilly areas, etc. Such photos are typically available from municipal or county engineering departments.

3.1.3 Data for Cluster Sampling

1. Census Data – Obtain Census Block Statistics and census tract maps from the most recent census. The Block Statistics information is printed for all cities which had populations over 50,000 in 1970. Table 3.1-1 lists all cities for which the data are available and the report number for the particular book.

   (Note that if a community is not listed, there still may be census data available. The reports cover "urbanized areas" and hence often include small cities around a large urban center. Additionally, the "Selected Areas" reports may include data for your community.) The Census Bureau can give more detailed information about what is available. Table 3.1-2 lists the regional offices of the U.S. Census Bureau and how to contact them.

2. Residential Construction and Demolition Data – The Block Statistics report gives the number of housing units or households on every city block at the time the census was taken. This information is crucial

Table 3.1-1

List of HC(3) Block Statistics Reports *

Report number	Area
	ALABAMA
1	Birmingham
2	Gadsden
3	Huntsville
4	Mobile
5	Montgomery
6	Tuscaloosa
7	Selected Areas
	ALASKA
8	Selected Areas
	ARIZONA
9	Phoenix
10	Tucson
11	Selected Areas
	ARKANSAS
12	Fort Smith
13	Little Rock-North Little Rock
14	Pine Bluff
15	Selected Areas
	CALIFORNIA
16	Bakersfield
17	Fresno
18	Los Angeles-Long Beach
19	Oxnard-Ventura-Thousand Oaks
20	Sacramento
21	Salinas
22	San Bernardino-Riverside
23	San Diego
24	San Francisco-Oakland
25	San Jose
26	Santa Barbara
27	Simi Valley
28	Stockton
29	Selected Areas
	COLORADO
30	Colorado Springs
31	Denver
32	Pueblo
33	Selected Areas
	CONNECTICUT
34	Bridgeport
35	Bristol
36	Hartford
37	Meriden
38	New Britain
39	New Haven
40	Norwalk
41	Stamford
42	Waterbury
	DELAWARE
43	Wilmington
	DISTRICT OF COLUMBIA
44	Washington
	FLORIDA
45	Fort Lauderdale-Hollywood
46	Jacksonville
47	Miami
48	Orlando
49	Pensacola
50	St. Petersburg
51	Tallahassee
52	Tampa
53	West Palm Beach
54	Selected Areas
	GEORGIA
55	Albany
56	Atlanta
57	Augusta
58	Columbus
59	Macon
60	Savannah
61	Selected Areas
	HAWAII
62	Honolulu
63	Selected Areas
	IDAHO
64	Boise City
	ILLINOIS
65	Aurora-Elgin
66	Bloomington-Normal
67	Champaign-Urbana
68	Chicago-Northwestern Indiana
69	Decatur
70	Joliet
71	Peoria
72	Rockford
73	Springfield
74	Selected Areas
	INDIANA
75	Anderson
76	Evansville
77	Fort Wayne
78	Indianapolis
79	Lafayette-West Lafayette
80	Muncie
81	South Bend
82	Terre Haute
83	Selected Areas

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* Data from U.S. Bureau of the Census

The specific names listed below each State refer to urbanized areas; "Selected Areas" refer to other areas of the State which have contracted with the Census Bureau to provide block statistics.

Table 3.1-1 - Continued

Report number	Area
	IOWA
84	Cedar Rapids
85	Davenport-Rock Island-Moline
86	Des Moines
87	Dubuque
88	Sioux City
89	Waterloo
90	Selected Areas
	KANSAS
91	Topeka
92	Wichita
93	Selected Areas
	KENTUCKY
94	Lexington
95	Louisville
96	Selected Areas
	LOUISIANA
97	Baton Rouge
98	Lafayette
99	Monroe
100	Monroe
101	New Orleans
102	Shreveport
	MAINE
103	Lewiston-Auburn
104	Portland
105	Selected Areas
	MARYLAND
106	Baltimore
107	Selected Areas
	MASSACHUSETTS
108	Boston
109	Brockton
110	Fall River
111	Fitchburg-Leominster
112	Lawrence-Haverhill
113	Lowell
114	New Bedford
115	Pittsfield
116	Springfield-Chicopee-Holyoke
117	Worcester
	MICHIGAN
118	Ann Arbor
119	Bay City
120	Detroit
121	Flint
122	Grand Rapids
123	Jackson
124	Kalamazoo
125	Lansing
126	Muskegon-Muskegon Heights
127	Saginaw
128	Selected Areas
	MINNESOTA
129	Duluth-Superior
130	Minneapolis-St. Paul
131	Selected Areas
	MISSISSIPPI
132	Biloxi-Gulfport
133	Jackson
134	Selected Areas
	MISSOURI
135	Kansas City
136	St. Joseph
137	St. Louis
138	Springfield
139	Selected Areas
	MONTANA
140	Billings
141	Great Falls
142	Selected Areas
	NEBRASKA
143	Lincoln
144	Omaha
145	Selected Areas
	NEVADA
146	Las Vegas
147	Reno
	NEW HAMPSHIRE
148	Manchester
149	Selected Areas
	NEW JERSEY
150	Atlantic City
151	Trenton
152	Vineland-Milleville
153	Selected Areas
	NEW MEXICO
154	Albuquerque
155	Selected Areas

Table 3.1-1 - Continued

Report number	Area
	NEW YORK
156	Albany-Schenectady-Troy
157	Binghamton
153	Buffalo
159	New York-Northeastern New Jersey
	Part 1 - New York City
	Part 2 - New York Portion Outside New York City
	Part 3 - Northeastern New Jersey
160	Rochester
161	Syracuse
162	Utica-Rome
163	Selected Areas
	NORTH CAROLINA
164	Asheville
165	Charlotte
166	Durham
167	Fayetteville
168	Greensboro
169	High Point
170	Raleigh
171	Wilmington
172	Winston-Salem
173	Selected Areas
	NORTH DAKOTA
174	Fargo-Moorhead
	OHIO
175	Akron
176	Canton
177	Cincinnati
178	Cleveland
179	Columbus
100	Dayton
181	Hamilton
182	Lima
183	Lorain-Elyria
184	Mansfield
185	Springfield
186	Steubenville-Weirton
187	Toledo
188	Youngstown-Warren
189	Selected Areas
	OKLAHOMA
190	Lawton
191	Oklahoma City
192	Tulsa
193	Selected Areas
	OREGON
194	Eugene
195	Portland
196	Salem
197	Selected Areas
	PENNSYLVANIA
198	Allentown-Bethlehem-Easton
199	Altoona
200	Erie
201	Harrisburg
202	Johnstown
203	Lancaster
204	Philadelphia
205	Pittsburgh
206	Reading
207	Scranton
208	Wilkes-Barre
209	York
210	Selected Areas
	RHODE ISLAND
211	Providence-Pawtucket-Warwick
	SOUTH CAROLINA
212	Charleston
213	Columbia
214	Greenville
215	Selected Areas
	SOUTH DAKOTA
216	Sioux Falls
217	Selected Areas
	TENNESSEE
218	Chattanooga
219	Knoxville
220	Memphis
221	Nashville-Davidson
222	Selected Areas
	TEXAS
223	Abilene
224	Amarillo
225	Austin
226	Beaumont
227	Brownsville
228	Corpus Christi
229	Dallas
230	El Paso
231	Fort Worth
232	Galveston
233	Harlingen-San Benito
234	Houston
235	Laredo
236	Lubbock
237	McAllen-Pharr-Edinburg
238	Midland
239	Odessa
240	Port Arthur
241	San Angelo
242	San Antonio
243	Sherman-Denison

Table 3.1-1 - Continued

Report number	Area
	TEXAS (Continued)
244	Texarkana
245	Texas City-La Marque
246	Tyler
247	Waco
248	Wichita Falls
249	Selected Areas
	UTAH
250	Ogden
251	Provo-Orem
252	Salt Lake City
	VERMONT
253	Selected Areas
	VIRGINIA
254	Lynchburg
255	Newport News-Hampton
256	Norfolk-Portsmouth
257	Richmond
258	Roanoke
259	Selected Areas
	WASHINGTON
260	Seattle-Everett
261	Spokane
262	Tacoma
263	Selected Areas
	WEST VIRGINIA
264	Charleston
265	Huntington-Ashland
266	Wheeling
267	Selected Areas
	WISCONSIN
268	Green Bay
269	Kenosha
270	Madison
271	Milwaukee
272	Racine
273	Selected Areas
	WYOMING
274	Selected Areas
	PUERTO RICO
275	Mayagüez
276	Ponce
277	San Juan
278	Selected Areas

Table 3.1-2

U.S. Bureau of the Census
Field Data User Services Offices

(July 1977)

- 1365 Peachtree St., N.E., Room 625
  Atlanta, Georgia 30309
  Telephone: (404) 881-2274

- 441 Stuart St., 10th Floor
  Boston, Massachusetts 02116
  Telephone: (617) 223-0668

- 230 So. Tyron St., Suite 800
  Charlotte, North Carolina 28202
  Telephone: (704) 372-0711, ext. 351

- 55 E. Jackson Blvd., Suite 1304
  Chicago, Illinois 60604
  Telephone: (312) 353-0980

- 1100 Commerce St., Room 3C54
  Dallas, Texas 75242
  Telephone: (214) 749-2394

- 575 Union Blvd.
  P.O. Box 25207
  Denver, Colorado 80225
  Telephone: (303) 234-5825

- Federal Bldg., U.S. Courthouse
  231 W. Lafayette, Room 565
  Detroit, Michigan 48226
  Telephone: (313) 226-4675

- One Gateway Center
  4th & State Streets
  Kansas City, Kansas 66101
  Telephone: (816) 374-4601

- 11777 San Vicente Blvd., Room 810
  Los Angeles, California 90049
  Telephone: (213) 824-7291

- Federal Office Bldg., Room 4102
  26 Federal Plaza
  New York, New York 10007
  Telephone: (212) 264-3870

- William J. Green, Jr. Federal Bldg.
  600 Arch Street, Room 9244
  Philadelphia, Pennsylvania 19106
  Telephone: (215) 597-8314

- Lake Union Bldg.
  1700 Westlake Avenue North
  Seattle, Washington 98109
  Telephone: (206) 442-7080

for the sample design and, therefore, must be as up-to-date as possible. Obtain data on any changes in the number of households on a block that have occurred since the most recent census by gathering information about housing starts, demolition, construction of new blocks, consolidation of blocks, and so forth. Often current information may be obtained from a regional planning office, city engineer or tax assessor. Utility companies may be able to provide information about utility installations. It may even be necessary to visit some areas of the city in order to count changes in buildings and households. Use initiative to gather complete data. The more accurate the information obtained beforehand, the less correction will need to be made.

3.2 Stratification: Noise Zones and Areas

This section gives instructions for dividing the city into two strata: first, into noise zones; and second, into areas. The noise zones are defined on the basis of a predominance of activities with distinctive noise characteristics. The areas are defined on the basis of population, social, ecological and environmental characteristics. Although many of the noise zones are not residential zones, we nevertheless expect that there will be households in every zone. Furthermore, the sample is designed to select households from each zone as well as from each area.

3.2.1 Definition of Noise Zones

Noise Zones

In this sample design, as many as 16 basic noise zones can be defined, although there will probably be fewer. The zones are listed in Table 3.2-1. While 16 types of zones are given, many communities will not have all types. Some cities, for example, will not have an airport or a railroad. It is also very unlikely that communities with population sizes appropriate for this study will have any residential sections with very high densities ("Very High Density" is defined in STEP 12).

The names of the noise zones reflect the type of activity or land use for that area. For example, a railroad noise zone will consist of a strip of land alongside a railroad track, an area assumed to be influenced by train noise. However, there may be three or four railroad routes crossing a city. In this case, there is only one railroad noise zone but it is made up of three or four strips of land alongside each of the routes. Similarly, for the other zones, all areas which have the qualities of a particular zone type will be considered as a single zone. Thus, most of the "noise zones" will actually consist of many small individual areas located throughout the city. Figure 3.2-1 illustrates this concept. Each Stationary Source Noise Zone is considered separate since the concept of acoustic homogeneity within a zone must be maintained and each stationary source may exhibit quite different noise characteristics.

Table 3.2-1

Recommended Noise Zones

Noise Zone	Code Number
Stationary Source Noise Zone (Optional)	16
Airport Noise Zone A	15
Airport Noise Zone B	14
Railroad Noise Zone	13
Central Business District Noise Zone	12
Major Roadway Noise Zone A	11
Minor Roadway Noise Zone - High Volume	10
Highway Noise Zone	09
Minor Roadway Noise Zone - Low Volume	08
Major Roadway Noise Zone B	07
Commercial Noise Zone	06
Industrial Noise Zone	05
Residential Noise Zone - Very High Density	04
Residential Noise Zone - High Density	03
Residential Noise Zone - Medium Density	02
Residential Noise Zone - Low Density	01

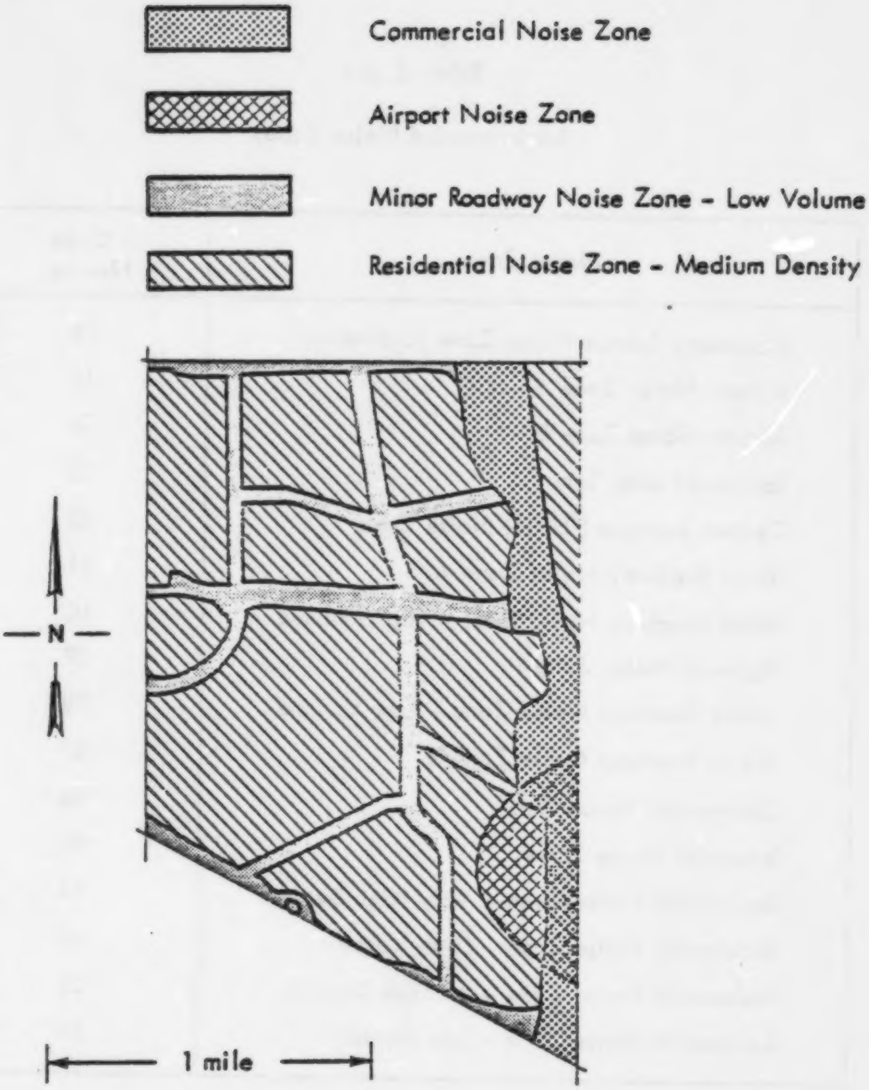

Commercial Noise Zone
Airport Noise Zone
Minor Roadway Noise Zone - Low Volume
Residential Noise Zone - Medium Density
N
1 mile

Figure 3.2-1. Example Noise Zones Plotted on a Portion of a City Map

It is important to realize that the noise zones which will be defined according to the procedures in this section are quite approximate. The definitions based on estimates of noise influence have been simplified for presentation in this workbook, but they are adequate for the sample design. The noise zones do not accurately define specific noise level contours or regions (with the exception of airport noise zones), and should not be used exclusively as a sharp geographical basis for community planning or the expenditure of public funds for relief from noise. In cases where accurate geographical delineations are required, qualified acousticians should be consulted.

Procedures for Plotting Noise Zones

STEP 1 – Obtain the Census Map of the City

Obtain the census tract maps of the city which were described in Section 3.1.1. While the noise zone boundaries will be plotted on these maps, any other detailed maps and/or aerial photos will be useful for defining zones.

STEP 2 – Review Data

All the data listed in Section 3.1.1 will be utilized in STEPS 3 through 12 to define noise zone boundaries. At each step, the information will have to be studied carefully.

Two types of data, however, are discussed in order to provide definitions about the information which they contain:

a. Airport Noise Data – A typical set of airport noise contours is shown in Figure 3.2-2. The contour marks the boundary of an area with a certain level of noise exposure. Within the NEF 40 contour in Figure 3.2-2, for example, there is one level of noise exposure. Between that line and the NEF 30 contour, there is a different (lower) level of noise exposure.

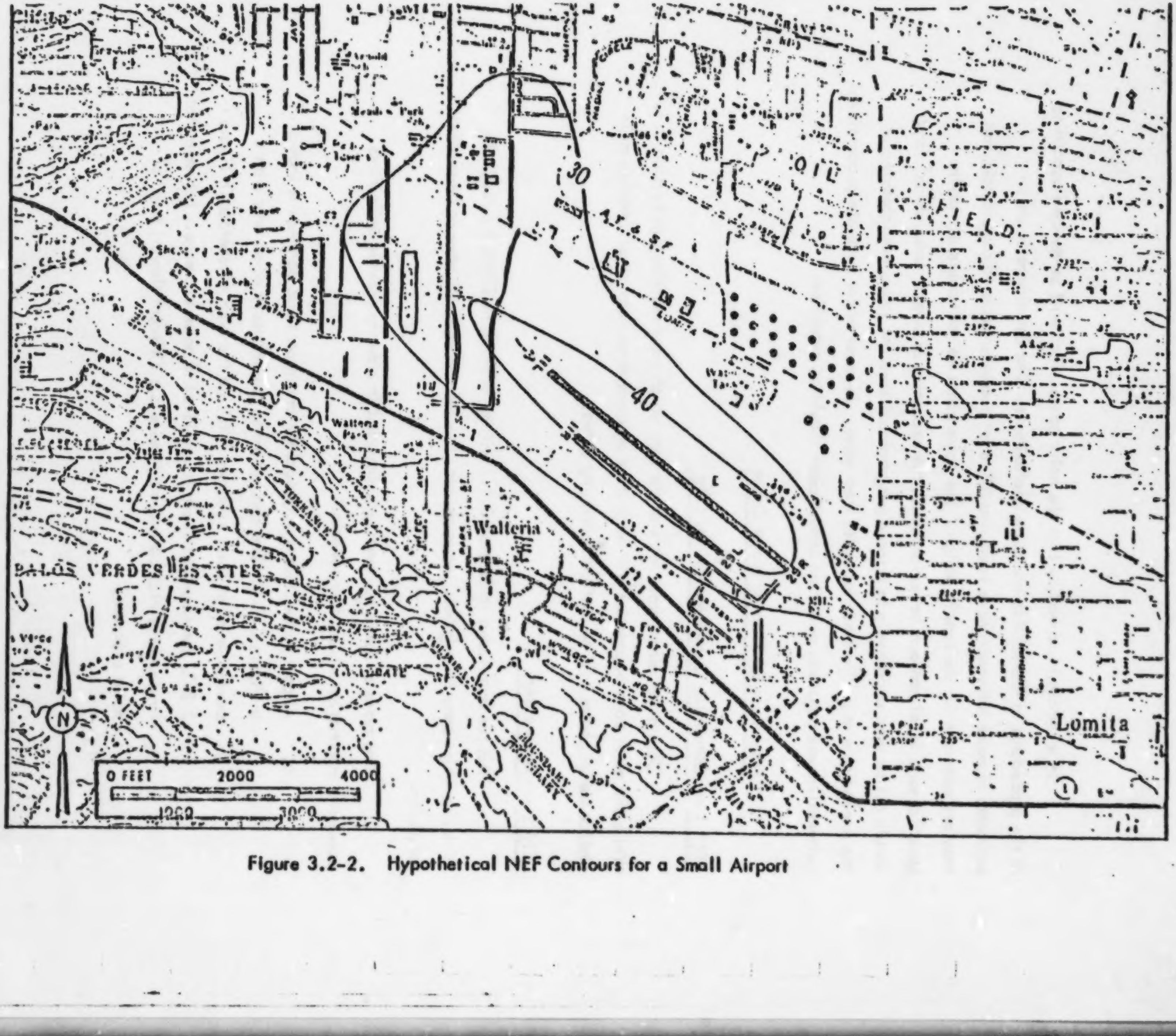

OIL
FIELD
30
40
Walteria
PALOS VERDES ESTATES
Lomita
N
0 FEET 2000 4000
1000 3000

Figure 3.2-2. Hypothetical NEF Contours for a Small Airport

Reproduced from
best available copy.

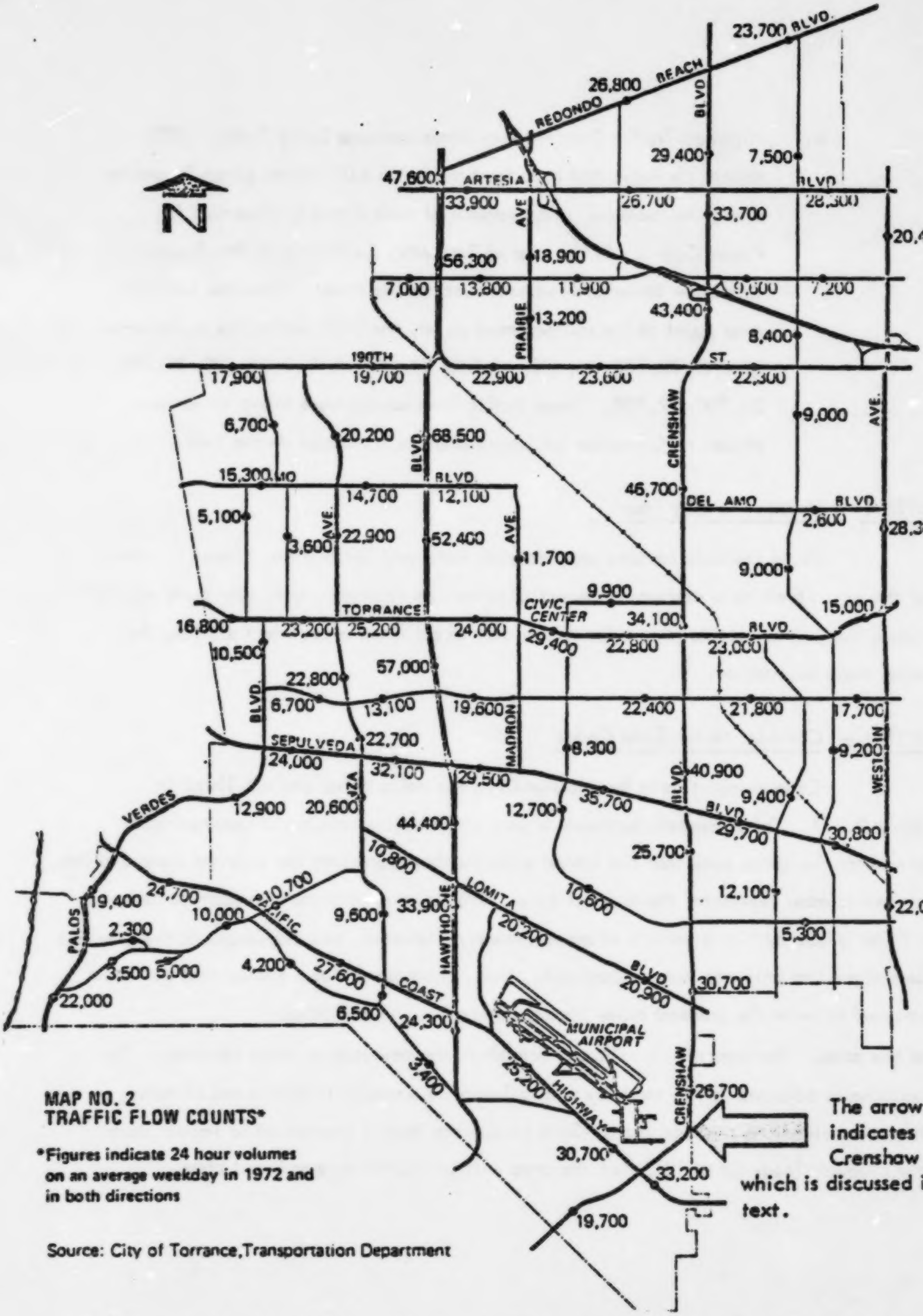
b. Highway Traffic Data – Many times Average Daily Traffic (ADT) counts are indicated on a road map with ADT values given for points along the roadway. An example of such a map is presented in Figure 3.2-3. In the map of Torrance, California in this figure, Crenshaw Boulevard represents an active street. From the northernmost point to the southernmost point, the ADT counts are as follows: 29,400; 33,700; 43,400; 46,700; 34,100; 40,900; 25,700; 30,700; 26,700; 19,700. These traffic flow counts were taken at various places on Crenshaw Boulevard and are indicated on the map.

STEP 3 – Update the City Map(s)

Using the data on land use, construction, and demolition, pinpoint areas of the city which have undergone recent construction changes – both new building and demolition. You may need to refer to the data about these areas when plotting the noise zone boundaries.

STEP 4 – Consider Noise Zone Codes

Code numbers have been assigned to the noise zones and are listed in Table 3.2-1. These numbers represent a very approximate ranking of assumed noise levels for the zones such that the lowest code number represents the quietest zone and the highest number represents the noisiest zone. The noise environment in each noise zone will be influenced by a variety of noise sources. However, any household in the city can be assigned to only one zone. Logically, then, the type of noise source that has been assumed to have the greatest noise impact determines the definition of the zone. For example, a railroad through-route may cross a minor roadway. The households adjacent to the roadway and railroad are exposed to both types of noise; however, since the railroad (code 13) is assumed to have a greater noise impact than the roadway (code 08 or 10), then the area will be plotted as a railroad zone.


N
REDONDO BEACH BLVD.
23,700
26,800
BLVD
29,400
7,500
47,600
ARTESIA
BLVD
33,900
26,700
33,700
28,300
AVE
20,400
56,300
18,900
7,000
13,800
11,900
9,000
7,200
PRAIRIE
13,200
43,400
8,400
190TH
ST.
17,900
19,700
22,900
23,600
22,300
6,700
20,200
BLVD
68,500
CRENSHAW
9,000
AVE.
15,300
MD
BLVD
14,700
12,100
46,700
DEL AMO
BLVD
5,100
AVE.
22,900
52,400
AVE
2,600
28,300
3,600
11,700
9,000
9,900
TORRANCE
CIVIC CENTER
34,100
BLVD.
15,000
16,800
23,200
25,200
24,000
29,400
22,800
23,000
10,500
57,000
22,800
BLVD.
6,700
13,100
19,600
22,400
21,800
17,700
MADRON
SEPULVEDA
22,700
8,300
9,200
24,000
32,100
29,500
BLVD
40,900
WESTERN
VERDES
35,700
BLVD.
9,400
12,900
20,600
12,700
29,700
30,800
44,400
10,800
25,700
LOMITA
10,600
12,100
22,000
PALOS
19,400
24,700
10,700
10,000
PACIFIC
9,600
33,900
20,200
5,300
2,300
HAWTHORNE
3,500
5,000
4,200
27,600
COAST
BLVD
20,900
30,700
22,000
6,500
24,300
MUNICIPAL AIRPORT
3,400
25,200
HIGHWAY
CRENSHAW
26,700
30,700
33,200
19,700

MAP NO. 2
TRAFFIC FLOW COUNTS*

*Figures indicate 24 hour volumes on an average weekday in 1972 and in both directions

Source: City of Torrance, Transportation Department

The arrow indicates Crenshaw Blvd., which is discussed in the text.

Figure 3.2-3. Typical Traffic Flow Map Showing Average Daily Traffic Counts (ADT).

The logical way to plot zones, then, would be to plot the noisiest zone first, the next noisiest second, and so forth, through the quietest. Generally, the instructions for defining zones follow this logic in STEPS 5 through 12 below. However, in the cases of roadway and airport zones, explanations are given for plotting the same types of zones in a single step (i.e., all roadway zones – Major A and B, Minor Low Volume and High Volume, and Highways – in one step; both airport zones – A and B – in one step). The instructions are presented in this manner because it is the easiest method of explanation. However, once you have a general idea for plotting the zones, you can proceed to do this most logically; i.e., defining zones in order from noisiest to quietest.

In addition to having a unique code number, each noise zone must be assigned a unique color code. It might become difficult to establish as many as 16 unique colors. Therefore, you might consider obtaining a large set of colored pencils, or using a combination of materials (e.g., crayons, pencils, felt pens, etc.).

STEP 5 – Estimate and Plot Stationary Source Noise Zones

The definition of any stationary source noise zone is optional and therefore should only be considered if the investigation of a particular noise environment is very important. Examples of noise sources which may be the basis of a stationary source noise zone are: refineries, power plants, major construction sites, sewage plants, race tracks, sports stadiums, or railroad yards. A minimum of a few residential blocks must be affected by the noise source and it must be a more or less permanent one; that is, in the area for approximately a 1-year period. If such a source exists, however, do not automatically define a noise zone around it. Only if the source is assumed to have an impact on a residential area, and the community is interested in assessing this impact, then consider it a noise zone.

If a stationary source noise zone is to be established, define it by establishing an area of influence around the noise source. Plot the noise zone(s) on the census maps by estimating the boundaries according to the following procedures:

a. On the map, locate the stationary noise source(s) which will be considered.

b. Determine the noise zone boundary by making a site visit to identify the approximate area of audible influence. Starting from several points around the noise source perimeter, walk or travel directly away from the source into the affected surrounding areas until the sounds from the source appear to be masked about half the time by sounds produced in the area such as traffic in local streets, children at play, etc. The location where this occurs marks one point on the noise zone boundary. Perform an adequate number of these "walk-away" tests (normally, between four and eight) to sufficiently define a smooth noise zone boundary for the source. All tests should be performed over a short period of time, during nonpeak traffic hours and normal weather conditions, and when the noise source is audible to at least a normal degree.

NOTE: It is possible that during a "walk-away" test, a roadway or highway noise zone will be encountered within which sounds from the stationary source are completely drowned out. If this occurs, be sure to continue the test on the far side of the roadway noise zone to check whether the noise from the stationary source becomes dominant once again as the roadway noise fades. If this is the case, the stationary noise zone will consist of areas on either side of the road. If not, the stationary source noise zone will merely stop when it meets the roadway noise zone. Similarly, "acoustical shadow areas" will be encountered where a tall building or other large object acts as a noise barrier to shield a small area from the noise source. If such an area is entered during the test, continue past the shielding object for a distance of about five times its height to determine if the source noise becomes dominant beyond the shadow area. Include any such shadow areas in the stationary source noise zone.

c. Using the colored pencil which corresponds to the code assigned to Stationary Source Noise Zones, plot the boundaries for the noise zone on the census maps. If an area has had a significant complaint history for the source but the procedure in b. fails to incorporate it, adjust the boundaries to include the area.

STEP 6 – Estimate and Plot Airport Noise Zones

Plot the zones around airports to follow the patterns of conventional airport noise contours. The actual boundary of the zone must follow the local streets that are nearest the contour so that the boundary does not split a block. It may cross large open spaces that do not contain residences. Normally, two airport noise zones will be established by following the procedures.

a. For each airport, review the available independently prepared airport noise contours to determine whether the L_{dn}, NEF, CNEL, or CNR system is used. If more than one system of contours is available for an airport, the L_{dn} contours are preferred, followed by NEF and CNEL. Use CNR contours only if these are the only ones available for a particular airport. The same system need not be used for all airports influencing the study area.

b. For the airport noise contour system being used, plot individual noise zone boundaries following the contour lines around each airport on the study base map as follows:

L_{dn} 75 and L_{dn} 65, or
NEF 40 and NEF 30, or
CNEL 75 and CNEL 65, or
CNR 110 and CNR 100.

If only the lower numbered contour line is shown, plot a boundary along that line only. If all of the contours given for an airport which fall outside the airport boundary have values less than L_{dn} 65, NEF 30, CNEL 65, or CNR 100, then no airport noise zones need be considered.

Similarly, if the airport is so small that an EIS has not been required, and no contours exist, it is not necessary to consider the airport noise influence in the survey. Airport contours and noise zones may be plotted across vacant land areas.

c. Indicate the areas bounded by these contours to be either an Airport Noise Zone A or an Airport Noise Zone B, based on Table 3.2-2, regardless of the type of land use or other noise zones covered.

Table 3.2-2

Airport Noise Zone Criteria

Airport Noise Contour	Airport Noise Zone
Greater than: L_{dn} 75 or NEF 40 or CNEL 75 or CNR 110	Airport Noise Zone A
Between: L_{dn} 65 and L_{dn} 75 NEF 30 and NEF 40 CNEL 65 and CNEL 75 CNR 100 and CNR 110	Airport Noise Zone B

One color should be assigned to indicate all Airport Noise Zone A areas and another to show all Airport Noise Zone B areas when plotting around all airports. An example of plotted airport noise zones is shown in Figure 3.2-4, based on the NEF contours shown in Figure 3.2-2.

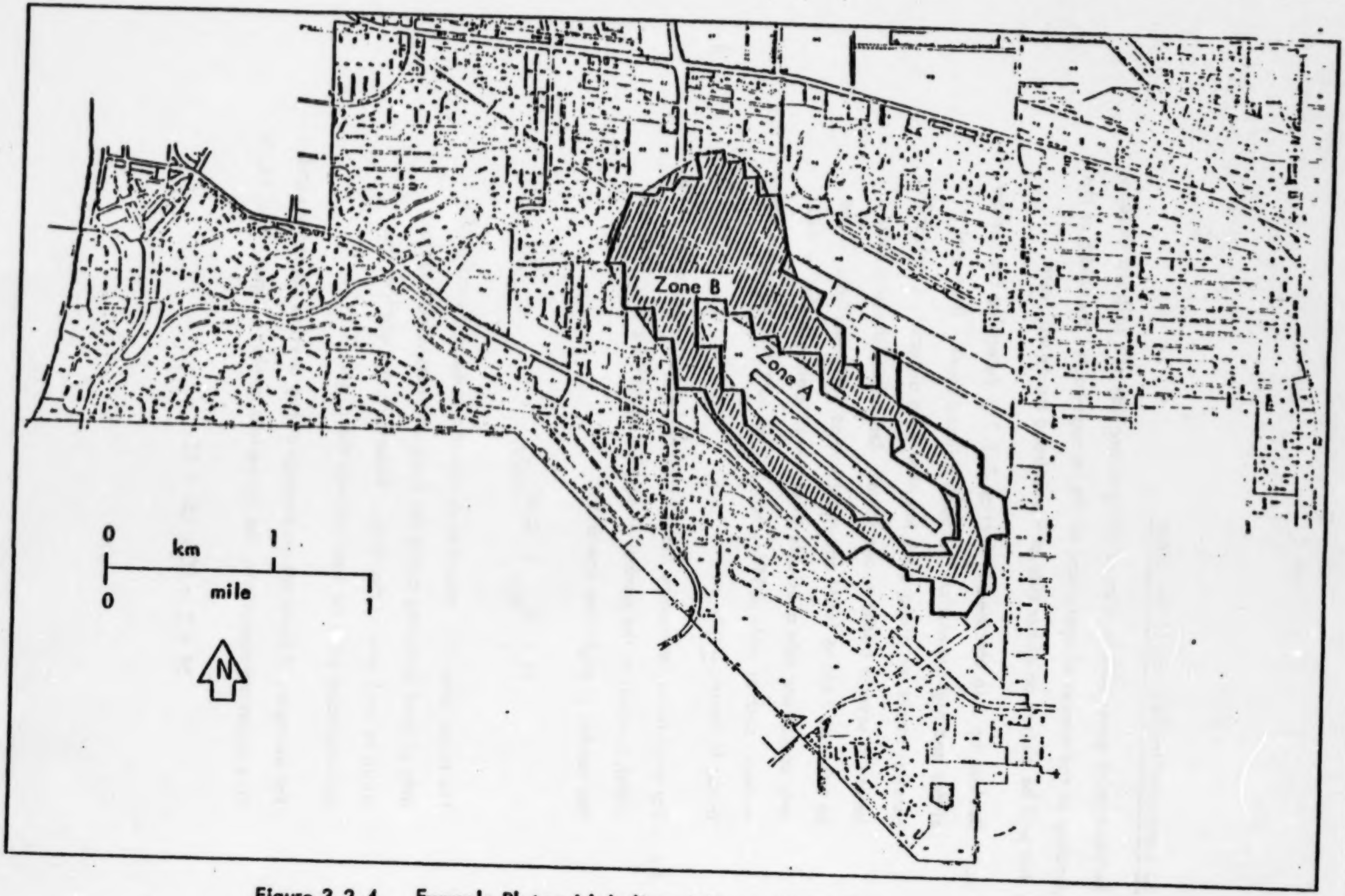

Zone B
Zone A
0
km
1
0
mile
1
N

Figure 3.2-4. Example Plot and Labeling of Airport Noise Zones Based on the Hypothetical Data Shown in Figure 3.2-2

STEP 7 – Estimate and Plot Railroad Noise Zones

Railroad noise zones will be plotted along either side of a railroad through-route. Depending on the number of operations on the through-route, the width of the noise zone that will be plotted on either side of the railroad tracks will vary.

a. Review the data obtained in Section 3.1.1 to determine the number of day and night operations for each railroad route. If several parallel tracks run along close together for a distance, consider this length of several tracks as one route. Remember, daytime should be taken as 7AM to 10PM and nighttime as 10PM to 7AM. If the only operations data available were for different but similar time periods, such as 6AM to 9PM, etc., these data may be used instead in the following steps.

b. For each route, calculate the equivalent number of operations, N, which is equal to the number of daytime operations plus 10 times the number of nighttime operations:

$$N = N_{day} + 10\,N_{night}.$$

c. The noise zone area around each railroad route will consist of a strip of land following along the route and extending a certain width to each side of the track. Determine the width of the railroad noise zone for each railway from Table 3.2-3.

For example, if there are an average of two daytime operations and five nighttime operations, the equivalent number of operations, N, is

$$N = 2 + 10 \times (5) = 52.$$

Thus, from Table 3.2-3, the railroad noise zone half-width (track to outer edge) is 152 meters (500 feet). The plotting of this zone is shown for a portion of an example community in Figure 3.2-5.

Note that if N is less than 5, no railroad zone need be considered for that route.

Table 3.2-3

Railroad Noise Zone Width from Track

Equivalent Number of Train Operations $N = N_{day} + 10N_{night}$	Railroad Noise Zone Width from Track Centerline, in meters (feet)
< 5	No Railroad Zone
5 to 7	31m (100')
8 to 10	46m (150')
11 to 16	61m (200')
17 to 19	76m (250')
20 to 35	92m (300')
36 to 50	122m (400')
51 to 80	152m (500')
81 to 140	183m (600')
141 to 250	244m (800')
251 to 400	305m (1000')

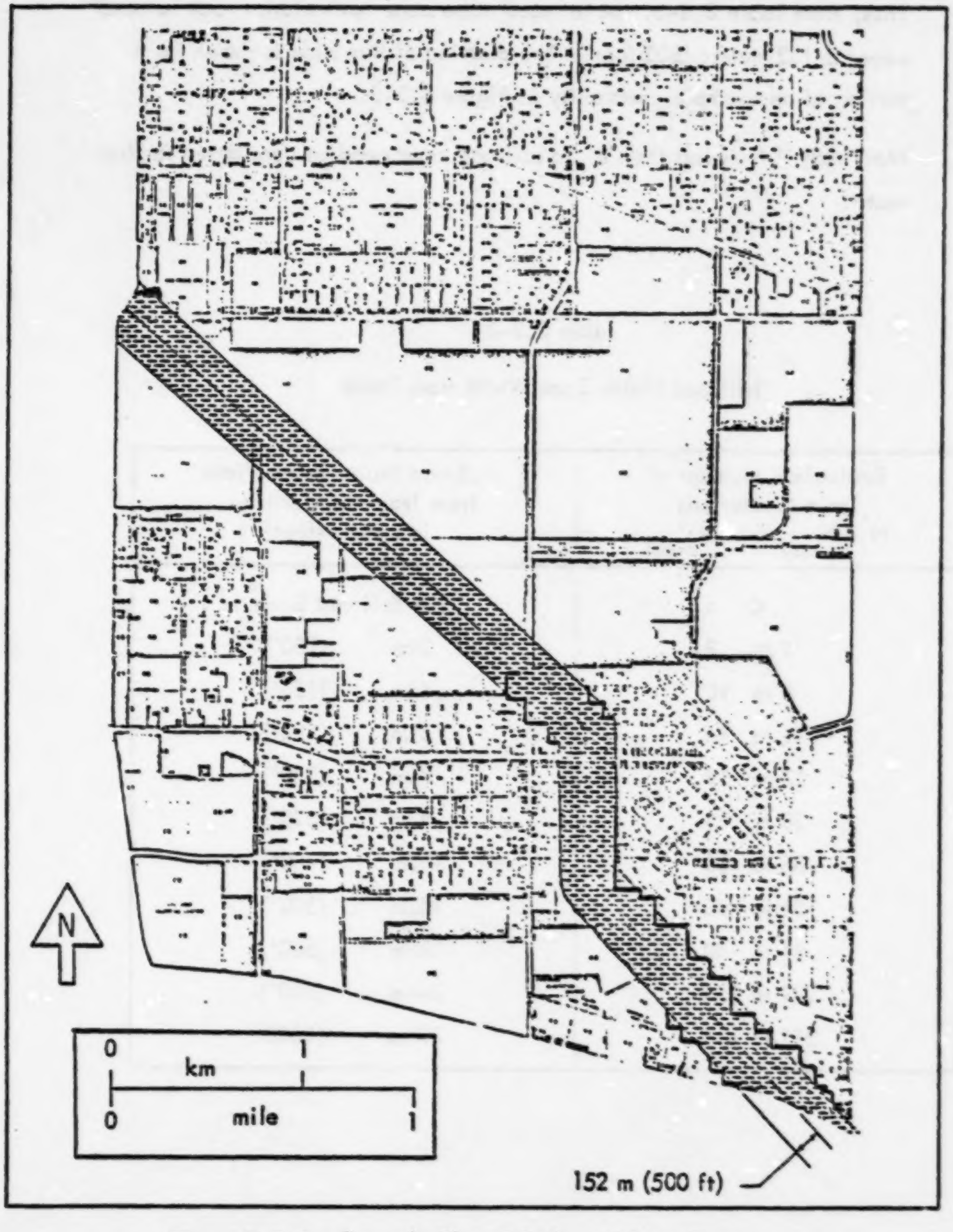

N
0
km
1
0
mile
1
152 m (500 ft)

Figure 3.2-5. Example Plot of Railroad Noise Zone

d. Plot a railroad noise zone along each side of each route regardless of adjacent land use. However, do not extend the railroad zone into regions already covered by an airport or stationary source noise zone.

It is likely that in many instances, the boundary for the zone will not fall on a natural boundary such as a street or alley. However, you may extend the boundary up to a distance less than or equal to the width determined in item c. so that it corresponds to a natural boundary. To the extent this can be done, it will facilitate the sampling procedures in Sections 3.3 to 3.6. If the zone cannot be expanded a distance great enough to meet a natural boundary, then plot the width determined in item c.

STEP 8 – Estimate and Plot Central Business District (CBD) Noise Zone

Establish the boundaries of a Central Business District (CBD). For this noise zone, the boundaries must be delineated along streets so that only entire blocks are designated in the CBD. Use the following guides to establish zone boundaries, relying on your understanding of the city to determine where CBD activities do or do not occur:

a. Consider the list of CBD characteristics:

1. Tends to be the approximate center of the urban area.
2. Intensive land use - little vacant or public land.
3. Highest land values.
4. Highest concentration of multi-story buildings (including tallest).
5. Highest daytime population.
6. High concentration of:
    - Offices - including headquarters of establishments.
    - Retail businesses (not wholesale or commercial storage).

- Theaters
- Hotels
- Services (finance, insurance, etc.)
- Public and organizational type buildings.
- Multi-story parking structures or high-density parking lots.
- Older cities - established small manufacturing firms.
- Buildings with transient residents.

7. Wide diversity of shops, goods, and services.
8. High traffic flows.
9. Center of city's mass transportation.

b. Locate on the map the (most likely) central area which incorporates these characteristics. It may be necessary to travel to some sections of the city to make a determination of the boundaries for the CBD. In general, if blocks which are near the boundary have at least one-half CBD type land use, include them in the CBD. In addition, pockets within the CBD which have little CBD land use, but which are clearly surrounded by CBD land use (e.g., a park), should be included in the CBD. However, do not include strip commercial areas extending outside the CBD along roads. Determine the boundaries for the CBD along streets.

c. Plot the boundaries for the CBD noise zone on the map, using the appropriate color code. If the unlikely situation arises in which the CBD, as it is defined, incorporates an already established noise zone (airport, railroad, or stationary source), then do not superimpose the CBD zone over these previously defined zones.

STEP 9 – Estimate and Plot Roadway Noise Zones

Roadway noise zones will be drawn along each side of Minor Roadways, Major Roadways, and Highways.

- For purposes of this survey, Minor Roadways are considered to have Average Daily Traffic Counts $4000 \leq ADT < 36,000$

  Low Volume: $4000 < ADT < 12,000$
  High Volume: $12,000 \leq ADT < 36,000$

- Major Roadways are considered to have $ADT \geq 36,000$
- Highways are limited access roads such as tollways or freeways

Note: The ADT count often varies along different segments of the same roadway so that some segments of a street may constitute a major roadway and other segments may be a minor roadway. However, ADT counts are normally given for points rather than for segments of streets. Therefore, if it is necessary to distinguish between minor and major roadway segments of a street, use intersections with major crossroads which appear on the traffic flow map as the boundaries for the segments.

a. Locate on the survey map the two groups of minor surface roadway segments for which traffic data indicate ADT between 4,000 and 12,000 vehicles per day, and between 12,000 and 36,000 vehicles per day. Further, identify the portions of these roads that are not yet included in noise zones, or are within or adjacent to vacant land use areas. Frequently, many roadways in the 4,000 vehicle per day range have not undergone ADT measurements. For the purpose of this zone identification, it is only necessary to locate those roadways for which ADT data are available.

b. Plot sections of the minor roadway noise zones along each side of the portions of these roads where the zone would cover as yet unzoned or vacant areas. The zones should not be plotted over areas already covered by an airport, railroad, stationary source, or the CBD zone.

Designate separately the zones for roads with ADT from 4,000 to 12,000 vehicles per day, and from 12,000 to 36,000 vehicles per day. The noise zone along the former will be called the minor roadway low volume noise zone, and the latter will be named the minor roadway high volume noise zone. For each zone type, the zone width on each side of the road should equal the average distance from the pavement to the far end of the adjacent residential property along the road, or 61 meters (200 ft), whichever is less. Plot these areas on the map, using the color codes assigned to Minor Roadway Low Volume and Minor Roadway High Volume zones.

c. Locate on the base map all major surface roadways for which traffic data indicate ADT greater than 36,000 vehicles per day, and identify the portions within or adjacent to vacant or as yet unzoned land. Two separate zones will be plotted around the major roadways, but neither should be plotted over areas covered by an airport, railroad, or the CBD noise zone.

d. Plot the first major roadway noise zone adjacent to each portion of these roadways as was done in item b. above. These zones should be plotted in an assigned color and collectively referred to as major roadway noise zone A.

e. Immediately outside of each major roadway noise zone A, plot a second zone in a different color. This outside zone should begin at the boundary of zone A and extend a sufficient distance from the road to include the second row of residences and their full lot depth, but not more than an additional 61 meters (200 ft). These collective areas should be referred to as major roadway noise zone B.

f. On the base map, locate the portions of all limited access highways within or adjacent to as yet unzoned or vacant land.

g. Plot a highway noise zone adjacent to each side of these highway sections where the zone will cover residential or open land, and does not interfere with an airport, railroad, or the CBD noise zone. The zone width on each side of the highway should equal the average distance from the pavement to the far end of the adjacent residential property along the highway but should not exceed 244 meters (800 ft). These areas should be plotted with the assigned color to indicate the collective highway noise zone.

h. Review the code numbers assigned to the roadway zones in Table 3.2-1 to be sure that the roadway zones have been defined in keeping with the instructions in STEP 4. That is, be sure that the zone with the highest assumed noise level covers zones with lower assumed noise levels.

STEP 10 – Estimate and Plot the Commercial Noise Zone

a. Determine the regions of commercial land use by examining maps of existing land use and any additional land use data. If necessary, use a land use zoning map, but with caution, since it may not reflect actual land use due to vacant land, zoning changes, etc.

b. To establish the boundaries of a commercial noise zone, identify all areas which have this actual land use and which are not included in the CBD. If such an outlying location consists of a normal sized block, half or more of which is devoted to commercial use, and the remainder is predominantly residential, then assign the entire block to the commercial noise zone. If less than half the block is commercial, and the remainder is residential, you will assign this block to one of the residential zones discussed in STEP 12 below. Use the unique color code to plot the commercial zone and color in these areas of the map which have not previously been covered by stationary source, airport, railroad, or roadway zones.

STEP 11 – Estimate and Plot the Industrial Noise Zone

a. Determine the regions of industrial land use by examining maps of existing land use and any additional land use data. If necessary, use a land zoning map, but with caution, since it may not reflect actual land use due to vacant land, zoning changes, etc.

b. To establish the boundaries of the industrial zone, identify all areas which have this actual land use and which are not included in the CBD. As with the definition of the commercial zone, if a block or parcel of land is half or more than half devoted to industrial activity, and the remainder is residential, include the entire parcel in the industrial zone. If less than half is industrial, you will assign the parcel to one of the residential zones. Using the assigned color code, plot the boundaries of the industrial noise zone and shade the areas on the map. Do not color in areas which have been previously defined by stationary source, airport, railroad, roadway, or commercial zones.

STEP 12 – Estimate and Plot the Residential Noise Zones

The areas on the map which have not been included in the noise zones already plotted will be almost entirely subject to residential or public use, or they may be vacant. Since all sections of the city must be colored, residential zones will be defined, and the public and vacant lands will be included in the Residential Low Density Zone.

a. Determine the locations of residential land use by examining the available maps and land use data.

b. Review in detail the population density data discussed in Section 3.1.1. Establish the following zones using these population density guidelines.

Residential Low Density Noise Zone: 0 to 2000 people per square mile (0 to 770 people per square kilometer or 0 to 3 people per acre)

Residential Medium Density Noise Zone: 2000 to 6000 people per square mile (770 to 2320 people per square kilometer or 3 to 9 people per acre)

Residential High Density Noise Zone: 6000 to 18,000 people per square mile (2320 to 6950 people per square kilometer or 9 to 28 people per acre)

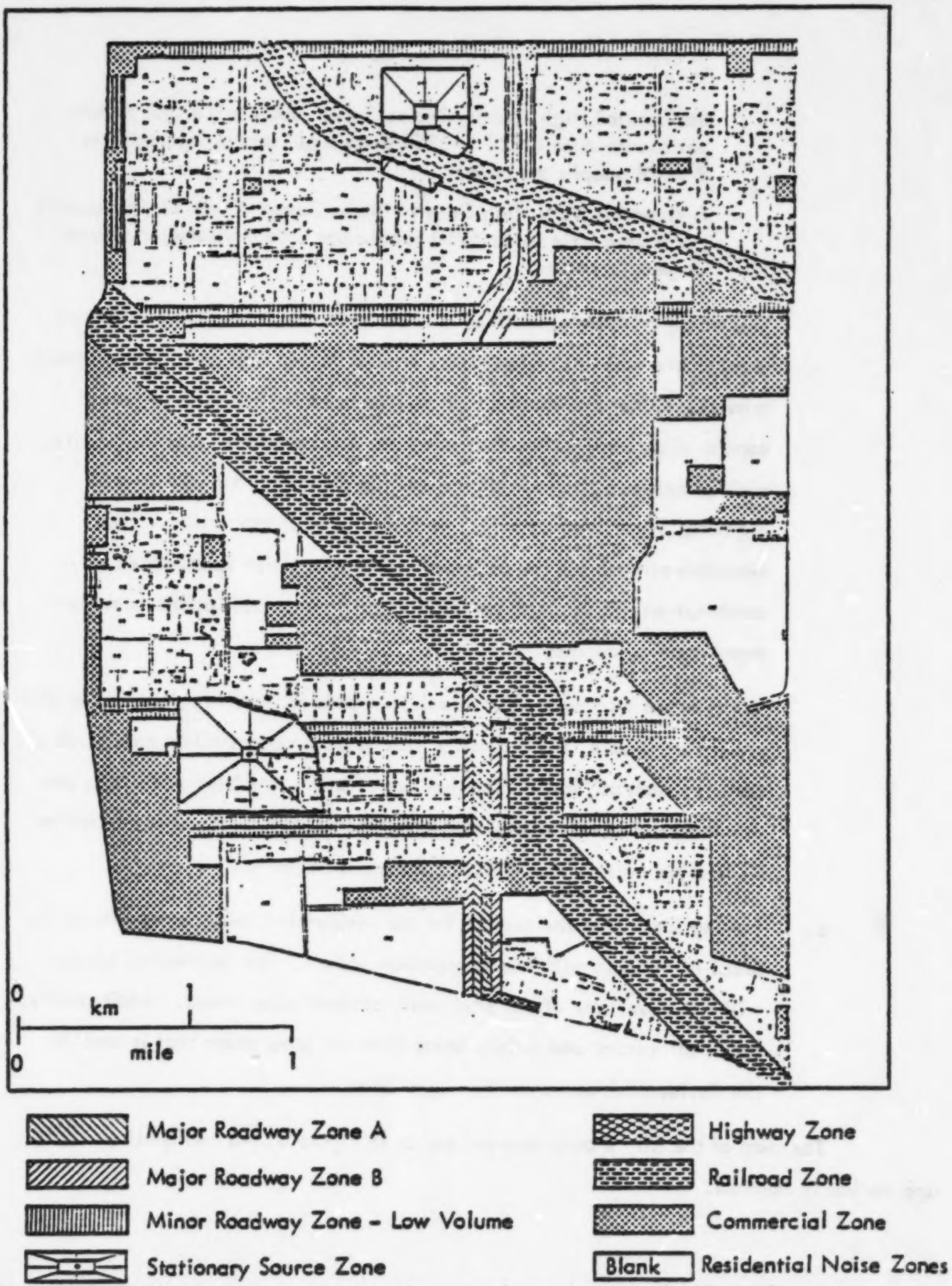
Residential Very High Density Noise Zone: Over 18,000 people per square mile (over 6950 people per square kilometer or over 28 people per acre).

The intent of these guidelines is to assist in separating the residential areas of the city into noise zones having unique and individual characteristics. Other boundaries that may be used for this purpose would consist of discontinuities that have occurred naturally within the city, such as between single family dwellings adjacent to a section of high-rise, multi-family units, or topographical separation. Thus, establish criteria for the different residential noise zones based on a combination of these unique local conditions as well as the numerical population guidelines.

In the event that numerical population data for small regions of the city are not available, but a density map based on qualitative statements of density, such as "low," "medium low," etc., has been prepared, use this qualitative map along with other knowledge of the area to outline distinctive noise zones with population differences.

c. Having identified the regions for the residential noise zones, shade the areas of the map with the appropriate colors. The residential zones will not cover any of the previously plotted noise zones. Additionally, shade all vacant and public lands with the same color that is used for the Residential Low Density Noise Zone.

The map of the city should now appear as in Figure 3.2-6, with all sections appropriately colored.


0
km
1
0
mile
1
Major Roadway Zone A
Major Roadway Zone B
Minor Roadway Zone - Low Volume
Stationary Source Zone
Highway Zone
Railroad Zone
Commercial Zone
Blank
Residential Noise Zones

(Note: For simplification, vacant areas have not been shown in this figure.)

Figure 3.2-6. Example Plotted Noise Zones

3.2.2 Definition of Areas

Areas

By dividing the city into geographical areas, it will be possible to analyze the characteristics and attitudes of residents from any area, and to compare areas. Since this will be an extremely useful tool in studying the data gathered from the survey, it is important to designate the areas as meaningfully as possible.

The survey is designed such that between five and seven areas may be defined. However, one of the areas is already defined; it consists of the Central Business District. This same geographical center must be considered an "area" and, therefore, an additional four to six areas may be designated.

Procedures for Plotting Area Boundaries

The following instructions describe how to define and plot areas of the city. Gather the data discussed in Section 3.1.2. Using the maps (and photos, if available) to give a visual illustration, the information will be reviewed in light of the instructions in order to determine the areas.

STEP 1 – Review Data

a. Planning and Development Data - Determine whether any existing planning offices or development programs have defined areas of the city for analysis or planning purposes. If these exist, it is strongly recommended that you incorporate them into the sample. Consider the number of areas which may be defined (four to six), to determine how the existing definitions fit the requirement.

b. Population Data - Review the information on how the population of the community is distributed. In areas outside the CBD, look for sections with high or low density. (Levels corresponding to "high" or "low" density will vary from city to city, although peripheral areas will normally be less dense.) Consider the age distribution to delineate pockets of younger and older residents. Also look at where single and married persons tend to live. In addition, note whether there are any ethnic neighborhoods or areas.

c. Socioeconomic Data - Determine which areas are occupied by higher and lower income residents. Also consider the distribution of groups with different educational levels throughout the city. In addition, if the information is available, distinguish where different occupational groups tend to reside - professionals, blue collars and industrial workers. Certainly, in many cases, these three types of groupings will tend to overlap.

d. Land Use Information - The single most important consideration regarding land use is the distinction between a central, more commercial, densely populated area and the outlying sections of the city which are more residential and less densely populated. In addition, however, within the outlying areas, note the distribution of single and multiple dwelling units and try to determine the areas where one type dominates over the other.

e. Topographical and Ecological Data - Note major features of the environment which might serve as natural boundaries, distinguishing areas from one another. These might be lakes, rivers, hills, etc. Beach communities, for example, might be distinguished from other areas.

STEP 2– Estimate and Plot Areas

One area has already been defined – the CBD. The exact boundaries for the CBD Noise Zone define the CBD Area. Therefore, the instructions for defining areas apply to the sections of the city outside the CBD. Between four and six additional areas may be determined. If areas have already been established by a community development or planning office, and there are between four and six (or they can be consolidated into four to six areas), then use these area definitions. Otherwise, follow the instructions in this step.

a. Review the information gathered about the city to determine which sections outside the CBD have common characteristics. Trying to take into account as many factors as possible, distinguish areas which are more or less internally homogeneous and which differ from one another in some meaningful ways. Use residential population density as a major criterion. Large areas having densities that are internally fairly uniform but that differ significantly between areas should be noted. The amount of density differences which may be judged significant will depend on an understanding of local conditions, and may be modified by other factors such as neighborhood age, types of structures, typical lot size or typical land value. Also consider the age, sex, marital status, socioeconomic, and ethnic characteristics of the population distribution. In addition, note portions of the city characterized by industrial or other nonresidential use. Finally, topographical features should be considered. Large residential areas that possess a distinctive nature by virtue of elevation or separation by hills, rivers, or other large topographical boundaries should be noted. If a meaningful review of the data does not suggest areas for analysis, then consider the simple model in Figure 3.2-7 in which the CBD is distinguished from four outlying areas which equally divide the periphery. You might use a similar model. However, attempt to achieve a balance of populations among the areas which you define. This is more important than a spatially balanced division.

b. Draw the boundaries of the areas on the census tract map, making sure that every part of the city is designated to one of the areas. It might be easiest to first sketch the boundaries on a city map which is on a single sheet of paper, and then transfer them onto the several census maps.

NOTE: There is one rule for defining areas. Area boundaries must fall along streets, and therefore incorporate whole blocks. No block may be split between areas.

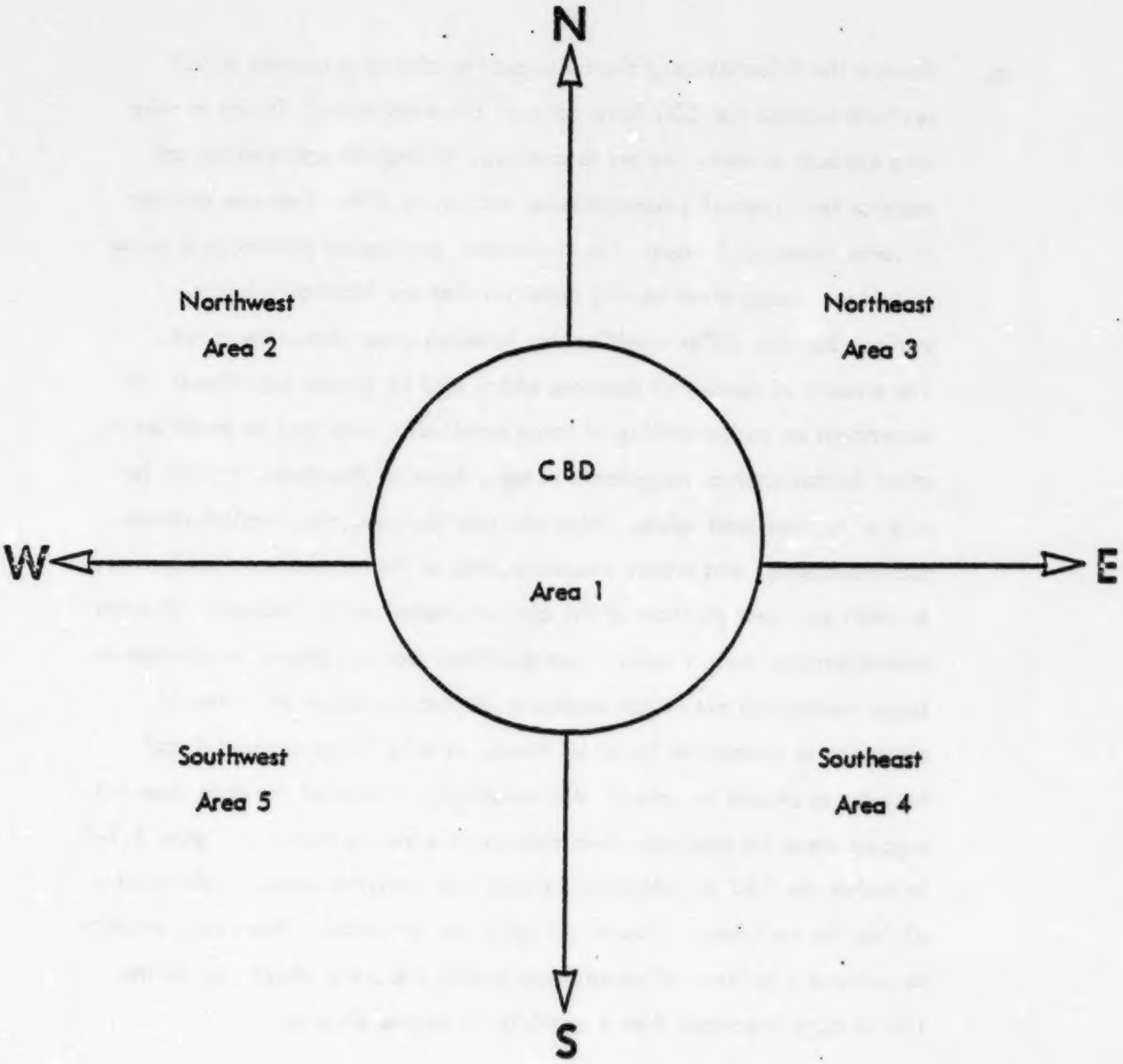

N
Northwest
Area 2
Northeast
Area 3
CBD
W
E
Area 1
Southwest
Area 5
Southeast
Area 4
S

Figure 3.2-7. A Simple Model for Designating Areas: the Central Business District and Four Outlying Areas

STEP 3— List and Code Areas

a. Assign names to the areas you have defined. The names must have no more than 16 characters (a space between words counts as one character). These names will appear on the data printout from the computer whenever area is considered in the analysis of the results. Therefore, try to make the names as descriptive as possible. You may, for example, use spatial names such as Central, East, West, and so forth.

b. Also assign a one-digit code number from 1 to 7 to each area. Area 1 is the CBD. Carefully consider how to assign the rest of the numbers since the computer will consistently give back information in sequential order. That is, in a list of information about areas, Area 1 is listed first, Area 2 second, and so forth. In addition, any table which includes information about areas will present the data in the same logical order. Hence, if you wish to make comparisons between particular areas, it would be reasonable to assign them successive numbers.

c. Finally, assign a unique color code to each area. These color codes must be different from the colors used to code noise zones, although only one color code is needed for the CBD.

3.2.3 Matching City Blocks to Noise Zones and Areas

STEP 1— Review Census Data

Familiarize yourself with the map of census tracts and the "Block Statistics" book.

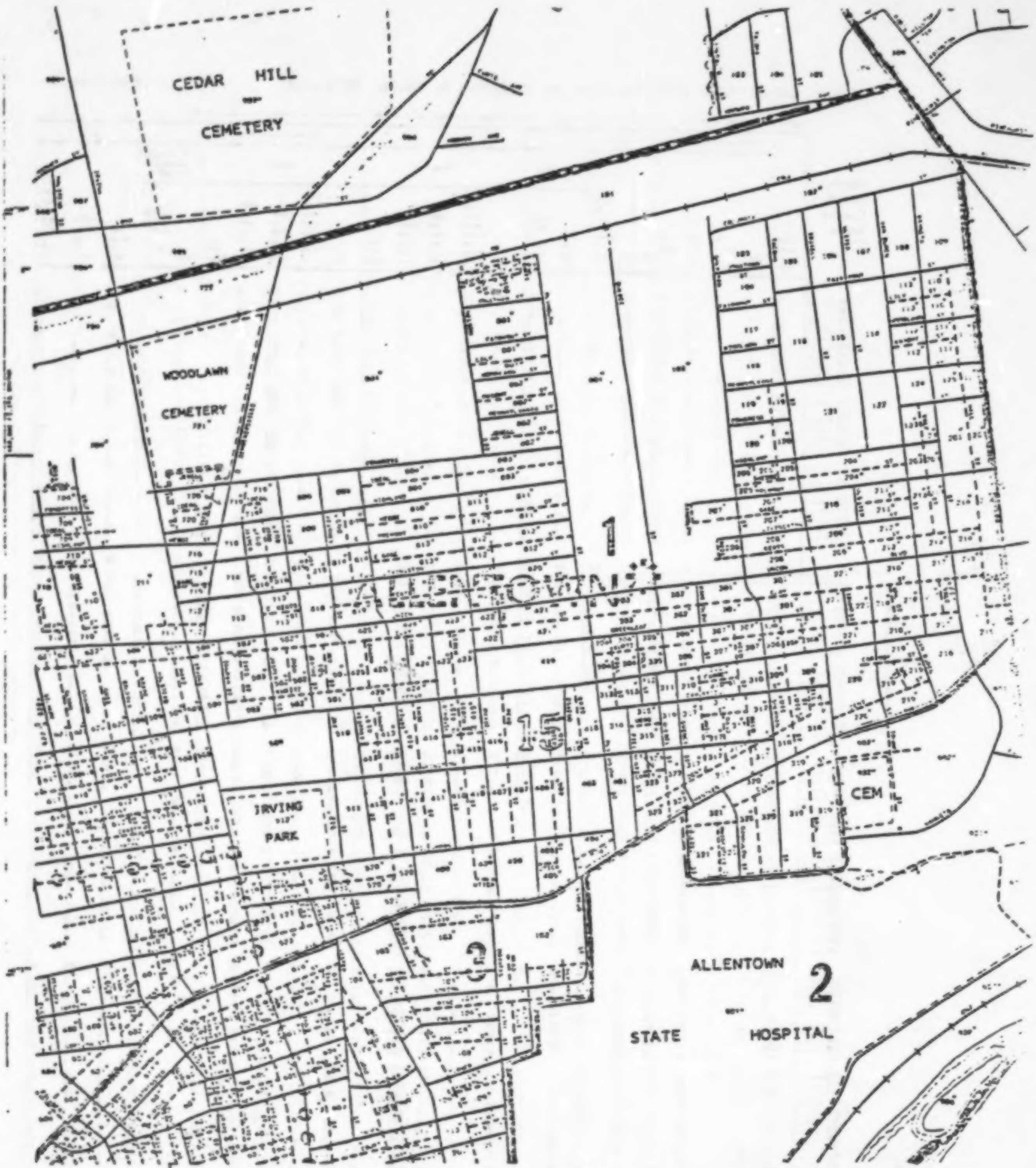
The Map

The map divides the city into sub-areas, called tracts. Figure 3.2-8 shows an example. Each tract has its own unique number (e.g., tracts are numbered 1, 2, and 3 in the illustration). Furthermore, every tract consists of a number of city blocks and each of these blocks is given a three-digit number. For example, in tract number 3, the first block is numbered 101 and the second is numbered 102 and so on. The census bureau has adopted the convention of numbering the first block of every tract with the same number, 101, so that there is more than one block in the city with that number. Therefore, to identify any block in the city, you need to know both the number of the census tract in which it is located, and its own block number; for example, tract number 3, block number 101. The map of census tracts for the city will cover every block which existed when the most recent census was taken.

The Block Statistics Book

Become familiar with how the Block Statistics Book is organized. Every tract in the city is listed in order from the tract with the lowest number to the one with the highest number. Every block within a census tract is listed in order from the block with the lowest number to the one with the highest. The tract and block numbers appear in the left-hand margin of each page. Figure 3.2-9 illustrates a page from the Block Statistics Book.

The Block Statistics Book gives various information about every tract and block in the city. In order to accurately read the information from the book, use a ruler. Otherwise, it is very easy to make errors. Having to correct mistakes later is always more time-consuming than doing the work carefully and conscientiously the first time.


CEDAR HILL CEMETERY
WOODLAWN CEMETERY
1
ALLENTOWN
15
IRVING PARK
CEM
3
ALLENTOWN STATE HOSPITAL
2
U.S. Department of Commerce,
Bureau of the Census,
Geography Division

Reproduced from
best available copy.

Figure 3.2-8. Example Census Tract Map

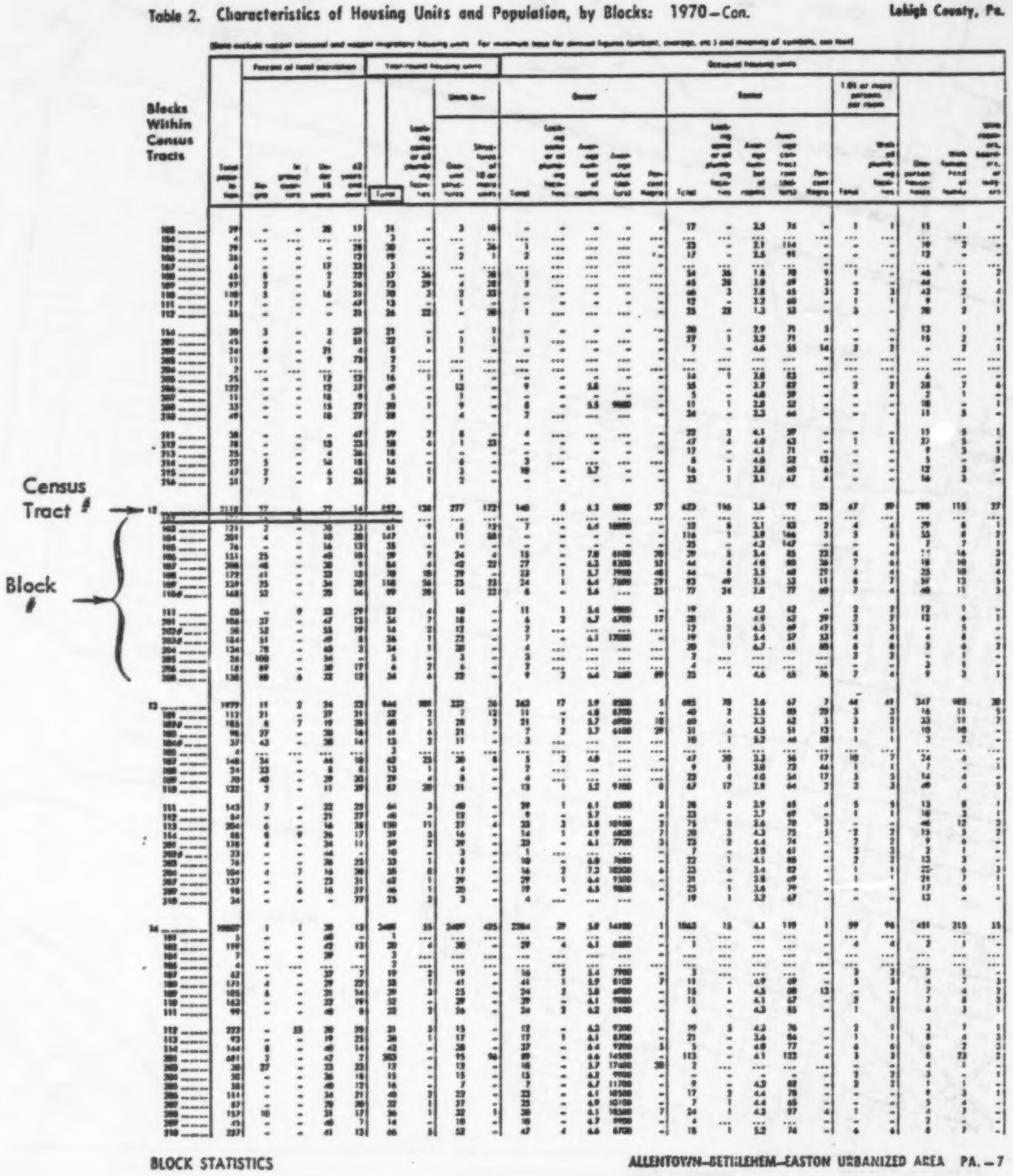


Table 2. Characteristics of Housing Units and Population, by Blocks: 1970—Con.

Lehigh County, Pa.

Blocks Within Census Tracts

BLOCK STATISTICS

ALLENTOWN–BETHLEHEM–EASTON URBANIZED AREA PA.—7

Census Tract #
Block #

Figure 3.2-9. Example Block Statistics Book

The only column with which you need to be familiar in order to take the sample is the column called "Year-round housing units -- Total." This column lists the number of "housing units" (called households in this workbook) which was counted in the most recent census for every census tract and for every block within a census tract. For census tract #12, in Figure 3.2-9, there were 852 households; for block #102 in tract #12, there were 4 households. If the number of households for each block of census tract #12 were added, the total would be 852.

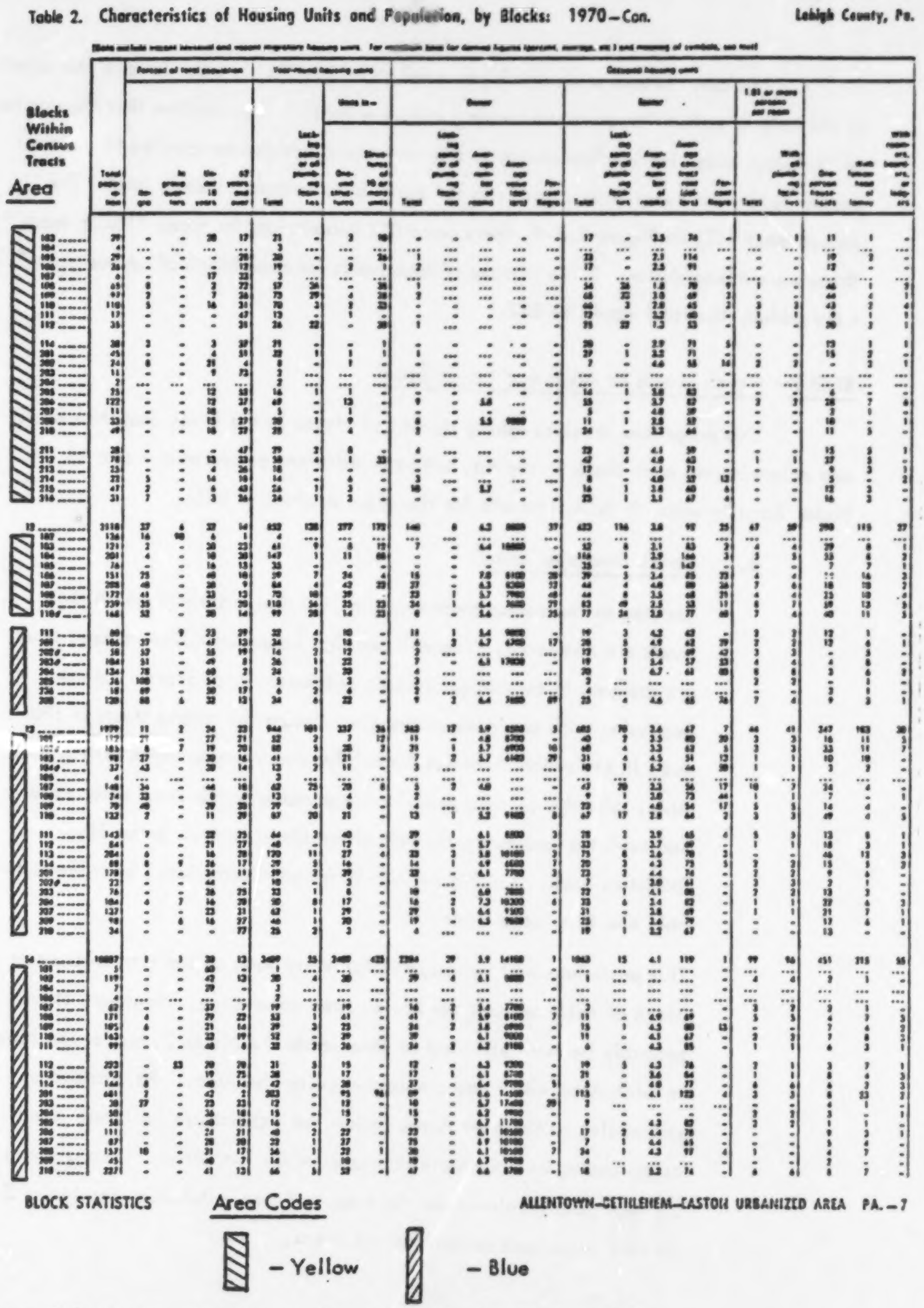
STEP 2— Match Blocks to Areas and Noise Zones

This procedure involves taking the list of blocks in the Block Statistics Book and color-coding each block in the city with two different color codes – one for the Noise Zone in which it falls, and one for the Area in which it falls.

a. Match Blocks to Areas

Looking at the census tract maps, notice the pattern in which the tracts are numbered. You will see that consecutively-numbered tracts are grouped in certain geographic sections. In an orderly fashion, beginning with one Area of the city, locate the census tracts in that Area in the Block Statistics Book. For every block which falls in that Area, take the colored pencil corresponding to the Area color code and mark the column to the left of the block number in the Block Statistics Book. See Figure 3.2-10 for an illustration. Each block has only one Area color code.

This procedure will be repeated for every Area of the city until each block of each census tract has an Area color code. However, it will probably be more efficient to color-code the Noise Zones for the blocks in each Area while you are color-coding the Areas. So, instead of proceeding to the next Area, follow the instructions for Noise Zone color-coding and complete this task for the first Area. Then proceed to the next Area, color-code the Area and then color-code the Noise Zones for that Area, and so forth for all Areas.



b. Match Blocks to Noise Zones

Beginning with the first census tract in an Area, determine for every block listed in that tract the Noise Zone (or Zones) in which the block falls. In some cases, an entire tract may fall into the same Noise Zone. Or a tract may be split into several zones. In other cases, a single block is split so that the section of the block facing one street falls into one zone and another section facing a different street falls into another zone. Just to the left of the Area color code in the Block Statistics Book, mark every block in the Area with the appropriate colored pencil to indicate the Noise Zone (or Zones) in which the block falls. See Figure 3.2-11 for an illustration. An efficient way to do this might be to first color-code the zone which dominates the tract or Area. For example, if a tract or Area is nearly entirely residential, color-code those blocks first; next, color-code roadways, and so forth.

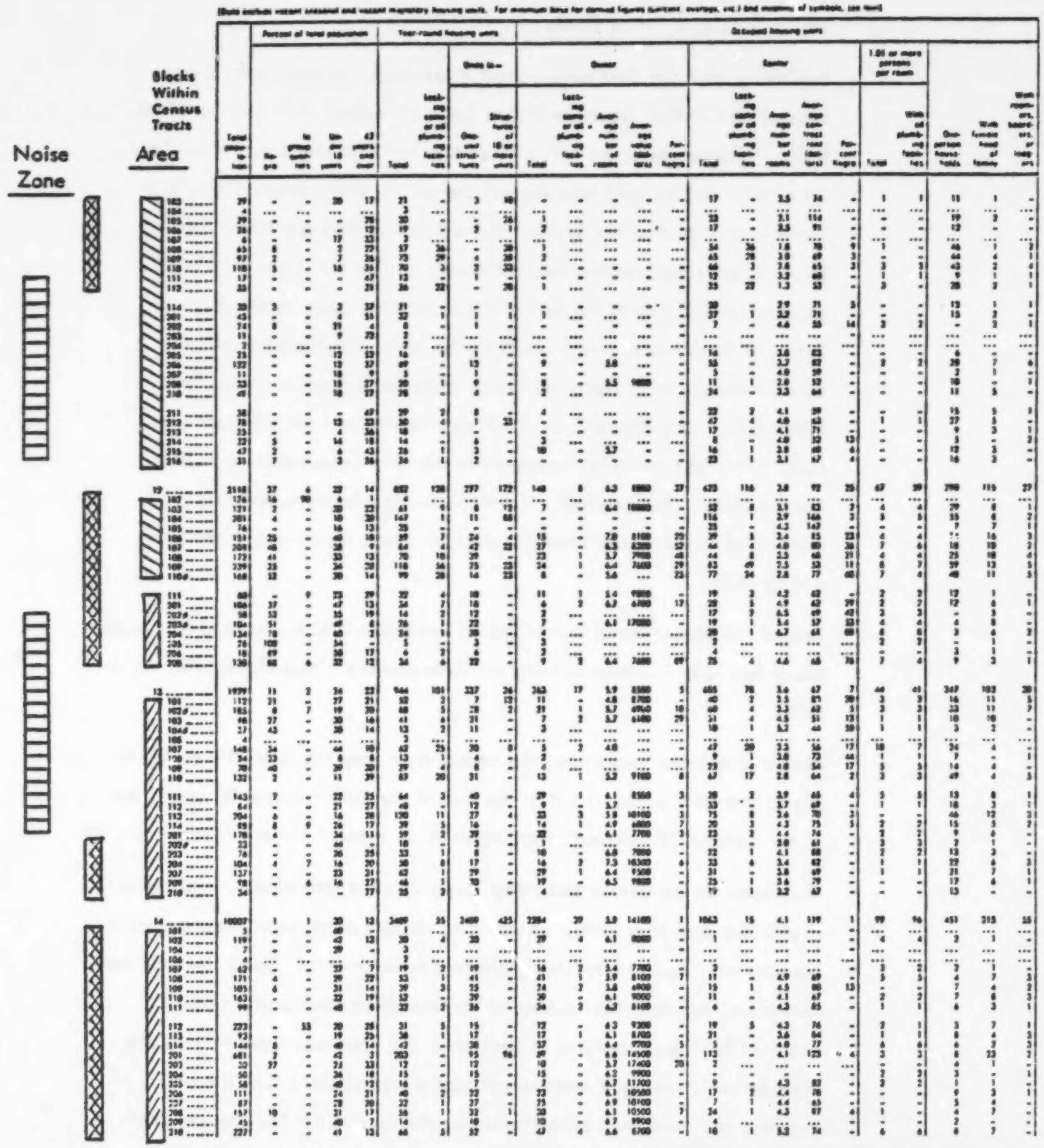
Repeat the procedure of color-coding Areas and Noise Zones so that each block has been assigned to both the Area and the Noise Zone in which it falls.

Note: If a block appears on the census tract map but is not listed in the Block Statistics Book, list it at the end of the list of blocks for that tract. In the column "Year-round housing units — Total," list the number zero (0).

If an area on the census tract map is not divided into blocks, arbitrarily divide the area into units. If possible, do this along easily recognizable boundaries. Assign identifying numbers to each unit. Using the best data available, estimate the number of households in each unit. (This is required for the procedures in Section 3.3.) You may want to visit the area before dividing it and estimating the households. List the unit numbers and household estimates under the section for that census tract in the Block Statistics Book. If necessary, clip an additional page into the book. Treat these units as blocks for the remainder of the sampling procedures.

Table 2. Characteristics of Housing Units and Population, by Blocks: 1970—Con.

Lehigh County, Pa.


Noise Zone
Blocks Within Census Tracts
Area

BLOCK STATISTICS

ALLENTOWN—BETHLEHEM—EASTON URBANIZED AREA PA.—7

Area Codes

▧ – Yellow

▨ – Blue

Noise Zone Codes

▩ – Green

▤ – Orange

Figure 3.2-11. Example Color-Coding Census Blocks with Noise Zone Codes

To minimize the possibility for error in this procedure, check the work at this stage. Do not continue to Section 3.3 until the matching of blocks to Noise Zones and Areas has been verified.

3.3 Cluster Selection

In this stage of the sampling procedures, 100 clusters (one or more city blocks) will be selected. Forms A, B, and C, which are found in Appendix B, will be needed for the selections. Because the instructions for selection are detailed, most of the explanation in this section will be presented through examples and illustrations.

3.3.1 Listing City Blocks and Assessing MOS (Measure of Size)

Cluster selection requires listing all the blocks in the city on Form A and assessing the measure of size (MOS), or the number of households, for each block. The probability that a block will be selected for the sample is related to the block MOS. Although the actual number of households for selected blocks will be obtained by the lister in the field, the MOS is an estimate based on the most recent census data and it is used for selection purposes.

STEP 1— Transfer Information from the Block Statistics Book

In this step, you will fill in columns 1 and 2 of Form A by listing the census tract and block numbers, and the number of households for each block, as the information is given in the Block Statistics Book.

The listing must be done in a precise order, according to the Noise Zone and the Area in which each block falls. The notations at the top of the worksheet will help keep things in the proper sequence. There is a space for the Noise Zone number, a space for the Area number, and the notation "Page ____ of _____." Since there will be a series of pages of worksheets for each Noise Zone, this notation is used to order the pages for any one zone. For example, if there are 10 pages of the worksheet for a zone, the first page would be numbered "Page 1 of 10," etc.

The blocks will be listed in the following way. All the blocks for Noise Zone 01 (or the lowest numbered zone if Zone 01 is not used) will be listed in one series of worksheets. Next, the blocks for Noise Zone 02 (or the next lowest numbered zone) will be listed, and so forth, until the highest numbered zone is listed.

Within the listing of each zone, however, the blocks must be listed by Area and this must also be done in a precise order. For the first zone listed, list all the blocks in Area 1 first, then the blocks in Area 2, and so forth, until the highest numbered Area is listed. For the second zone listed, list all the blocks in the highest numbered Area first, then the blocks in the next highest numbered Area, and so forth, until Area 1 has been listed. For the third zone, list the blocks in Area 1 first, then the blocks in Area 2, and so forth, until the highest numbered Area is listed (this is the same as for the first zone). For the fourth zone, list Areas in the same manner as for the second zone. This pattern of alternating the order in which the blocks in Areas are listed is repeated until all Noise Zones have been listed.

The rules for the ordering of the listing, then, is as follows. List blocks in order of Noise Zone, from the lowest numbered zone to the highest numbered zone. Within the listing for any one zone, list by Area, but alternate the ordering of Areas systematically: for example, first, Areas 1 to 7; next, Areas 7 to 1; next, Areas 1 to 7; next, Areas 7 to 1, and so forth until all zones are listed.

List the tract and block numbers, in the proper order, for every block in Column 1 of Form A. Go page-by-page through the Block Statistics Book and use a ruler to read the numbers. At the same time that this information is listed in Column 1, the block MOS (found in the column "Year-round housing units -- Total") will be transferred into Column 2. See Figure 3.3-1 for an illustration.

Once all the blocks for the first zone have been listed, repeat the procedure for the rest of the zones until all the blocks for all zones have been listed.

FORM A

CLUSTER SELECTION WORKSHEET

Noise Zone 02

Area 7

Page 1 of 9

Column 1 Tract & Block #	Column 2 Estimate of Block MOS	Column 3 Updated Estimate of MOS	Column 4 Cumulative MOS	Column 5 Estimated MOS Range	Column 6 X
20 - 103	5				
" - 104	4				
" - 105	3				
" - 106	10				
" - 201	121				
" - 202	27				
" - 203	6				
" - 204	10				
" - 205	15				
" - 206	300				
" - 301	15				
" - 302	5				
" - 303	6				
21 - 101	4				
" - 102	30				
" - 103	9				
" - 104	7				

Figure 3.3-1. Example Listing Blocks

The Special Case of a "Split-Block"

If any blocks fell into two or more zones and hence were color-coded with two or more zone colors, this is a case of a "split-block." Each of these blocks must be listed in a special way on Form A. No blocks are split between Areas.

a. The block must be listed for every zone in which it falls and hence may be listed on more than one worksheet.

b. The MOS for that block must also be listed but this requires "splitting" the MOS between the different zones into which the block falls. For example, the households which fall into the Highway Zone must be listed for that zone while those which fall into the Residential Zone must be listed for that zone.

How to split the MOS is really a matter of the best judgment which can be made. However, in general, take into account the location of the block relative to the noise sources and the way in which households are distributed on the block.

Be sure that the total MOS assigned to the different zones for a split-block does not exceed the total number of households for that block.

Before continuing to STEP 2, double-check the work done in STEP 1. If the listing is not correct, it must be redone or all the subsequent work will be in error.

STEP 2— Update the MOS

Since the estimated MOS for a block affects the probability for cluster selection, it should be as accurate as possible. It will probably be necessary to "update" the MOS in many cases, especially if the most recent census was conducted a number of years prior to the time the sample is taken. Updating is done on the basis of information about housing construction or demolition.

Generally, if it is suspected that an area has undergone major changes since the census (by major we mean greater than a 20 percent change in the number of households), then the MOS estimate from the Block Statistics will need to be adjusted. The regional planning office may have annual totals for new residential construction and demolition for each census tract which can be used to estimate housing growth or decline since the census. Pay particular attention to the construction of multi-unit dwellings, especially large apartment complexes. City engineers, tax assessors, or utility companies may also have sources from which to calculate housing changes. Check these sources for information about housing conversions; i.e., any modification on a single-unit dwelling which would indicate that it has become a multi-unit dwelling. Finally, be sure to check for data on housing demolitions from every possible source. Once a total number of additions and subtractions to the MOS listed by the census is established, the updated MOS can be listed in Column 3 of Form A.

If the contacts suggested above cannot provide information about housing changes, two persons should visit the area and make an approximate estimate of the number of households in the block. Do this if necessary because it will make the work more accurate and save time in the long run.

Although an updated MOS will not be established for every block, there must be an entry in Column 3 of Form A for every listed block. In some cases, then, the number from Column 2 will simply be copied into Column 3.

Before continuing to STEP 3, double-check the work done in STEP 2 to verify that it is correct.

STEP 3 — Link "Undersized" Blocks

Blocks with fewer than 15 households are considered "undersized" and must be linked with another block (or blocks). The way in which to link blocks is illustrated in Figure 3.3-2 and is discussed below. There are several guidelines for linking blocks.

a. Only blocks within the same Noise Zone and within the same Area can be linked.

FORM A

CLUSTER SELECTION WORKSHEET

Noise Zone 02

Area 7

Page 1 of 9

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Tract & Block #	Estimate of Block MOS	Updated Estimate of MOS	Cumulative MOS	Estimated MOS Range	X
20 - 103	5	~~3~~			
" - 104	4	~~4~~			
" - 105	3	~~3~~			
" - 106	10	~~20~~ 30			
" - 201	121	105			
" - 202	27	25			
" - 203	6	~~7~~			
" - 204	10	~~12~~ 19			
" - 205	15	15			
" - 206	300	320			
" - 301	15	16			
" - 302	5	~~5~~			
" - 303	6	~~6~~			
21 - 101	4	~~10~~ 21			
" - 102	30	30			
" - 103	9	~~9~~			
" - 104	7	~~7~~ 16			

Figure 3.3-2. Example Linking Blocks

b. Blocks must be linked together so that the total MOS for the linked blocks is at least 15.

c. Whenever possible, link blocks together which are in the same census tract. This will make the lister's and interviewer's work much easier if those blocks are selected.

d. In general, link a block to one listed just above it or just below it on Form A. If necessary, you may link blocks which are not consecutively listed, but do this minimally.

e. If there is a series of consecutive blocks with zero (0) MOS, these must be linked with other blocks. However, do not link these blocks together. As much as possible, link each block with zero (0) MOS to a different block.

f. Once blocks have been linked together they are considered as one cluster for the rest of the sampling procedures.

Look to Figure 3.3-2 for an illustration. When blocks are linked, draw a circle around the MOS figures in Column 3 of Form A for the blocks being linked. Then add together the numbers inside the circle. The sum must be at least 15. Write the sum outside the circle as shown in the examples. This becomes the MOS for the linked block. Draw an 'X' through the circle. Also, draw a circle around the block numbers in Column 1. Do this for every undersized block on the worksheets for each Noise Zone.

Before continuing to STEP 4, double-check the work in STEP 3 to verify that it is correct.

STEP 4— Cumulatively Add the MOS

Combine the worksheets for the different Noise Zones into one pile, placing them in Noise Zone order so that the list for zone (code) 01 is on top, the list for zone (code) 02 is next, etc. Be sure that the listing by Areas is in the correct alternating order, and that all the pages for each zone are in order.

The cumulative addition of MOS will be done using Column 4 of Form A. The numbers from Column 3 will be cumulatively added until an estimate of the total number of households in the city is calculated. The procedure is illustrated in Figure 3.3-3. For the first line only, take the MOS from Column 3 and write it in Column 4. For the next line, and every line thereafter, take the number in Column 3, add it to the last number in Column 4, and write the sum in the next space in Column 4. When you come to the last page of worksheets for the first zone, continue the addition to the worksheets for the next zone and so on, until all the worksheets are completed. The final sum in Column 4 is the estimated number of households in the city.

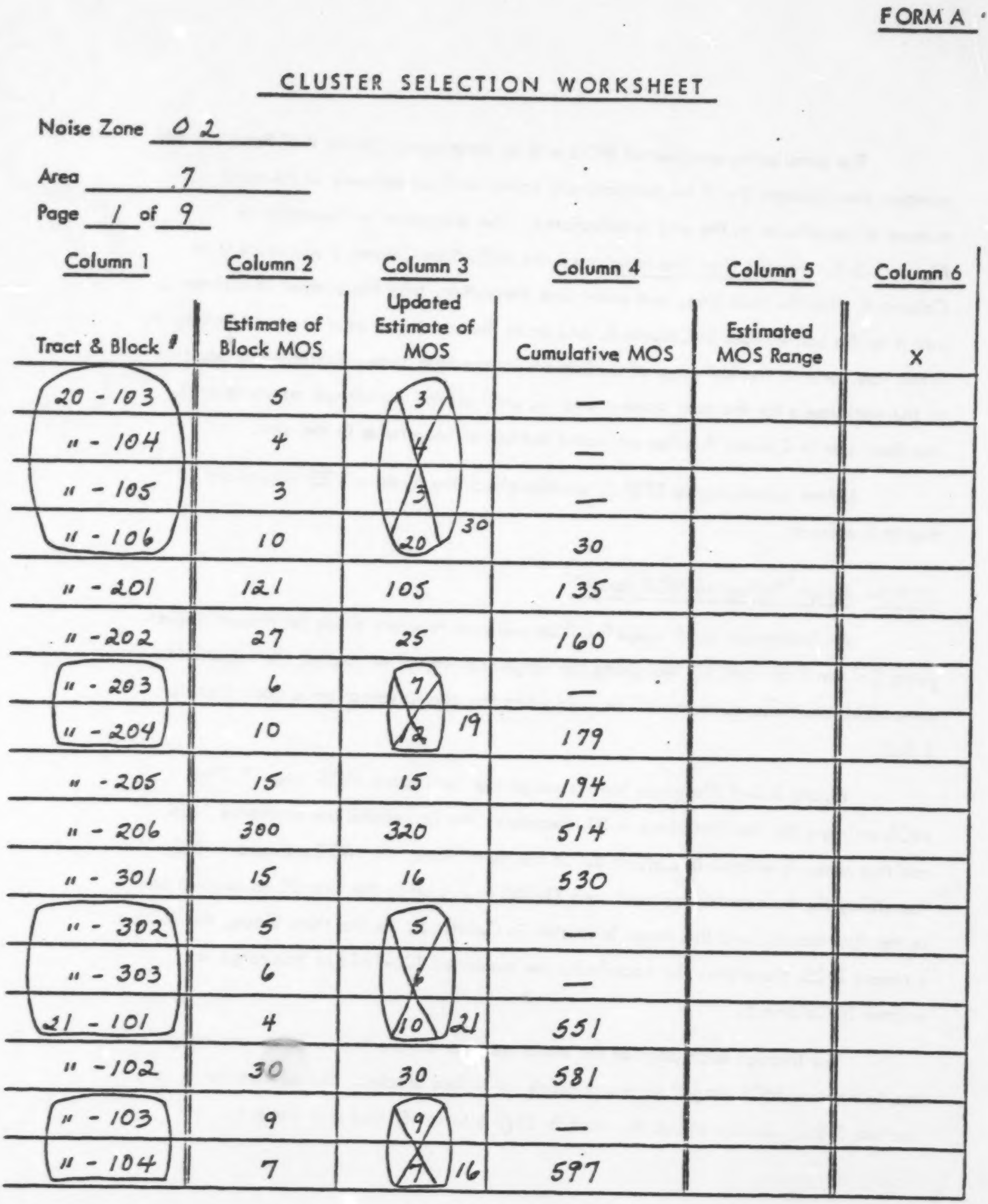
Before continuing to STEP 5, double-check the work in STEP 4 to verify that it is correct.

STEP 5– Assign "Estimated MOS Range"

An "estimated MOS range" will be assigned to every block (or linked blocks) using Column 5 of Form A. Assigning the range is a way of numbering the households in each block; these numbers will be used when the cluster selection is made (Section 3.3.2).

Figure 3.3-4 illustrates how to assign the "estimated MOS range." The MOS estimate for the first block is 30; therefore, the households are numbered 1-30 and this range is written in Column 5. In the next block, the MOS estimate is 105; therefore, the households are numbered 31-135 (i.e., since the first 30 households are in the first block), and this range is written in Column 5. In the third block, the MOS estimate is 25; therefore, the households are numbered 136-160 and this range is written in Column 5.

Go through each page of the worksheets for all the Noise Zones and assign the "estimated MOS range" for every block (or linked blocks). Before continuing to Section 3.3.2, double-check the work in STEP 5 to verify that it is correct.



FORM A

CLUSTER SELECTION WORKSHEET

Noise Zone 02

Area 7

Page 1 of 9

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Tract & Block #	Estimate of Block MOS	Updated Estimate of MOS	Cumulative MOS	Estimated MOS Range	X
20 - 103	5	~~3~~	—		
" - 104	4	~~4~~	—		
" - 105	3	~~3~~	—		
" - 106	10	~~20~~ 30	30		
" - 201	121	105	135		
" - 202	27	25	160		
" - 203	6	~~7~~	—		
" - 204	10	~~12~~ 19	179		
" - 205	15	15	194		
" - 206	300	320	514		
" - 301	15	16	530		
" - 302	5	~~5~~	—		
" - 303	6	~~6~~	—		
21 - 101	4	~~10~~ 21	551		
" - 102	30	30	581		
" - 103	9	~~9~~	—		
" - 104	7	~~7~~ 16	597		

Figure 3.3-3. Example Cumulatively Adding MOS

FORM A

CLUSTER SELECTION WORKSHEET

Noise Zone 02

Area 7

Page 1 of 9

Column 1 Tract & Block #	Column 2 Estimate of Block MOS	Column 3 Updated Estimate of MOS	Column 4 Cumulative MOS	Column 5 Estimated MOS Range	Column 6 X
20 - 103	5	~~3~~	—	—	
" - 104	4	~~4~~	—	—	
" - 105	3	~~3~~	—	—	
" - 106	10	~~20~~ 30	30	1 - 30	
" - 201	121	105	135	31 - 135	
" - 202	27	25	160	136-160	
" - 203	6	~~7~~	-	-	
" - 204	10	~~12~~ 19	179	161 - 179	
" - 205	15	15	194	180-194	
" - 206	300	320	514	195 - 514	
" - 301	15	16	530	515-530	
" - 302	5	~~5~~	—	—	
" - 303	6	~~6~~	—	—	
21 - 101	4	~~10~~ 21	551	531-551	
" - 102	30	30	581	552-581	
" - 103	9	~~9~~	—	—	
" - 104	7	~~7~~ 16	597	582-597	

Figure 3.3-4. Example Assigning "Estimated MOS Range"

3.3.2 Selection of Clusters

STEP 1 – Calculate the Cluster Sampling Interval

Use Form B, the Worksheet for Cluster Sampling Interval, to do the calculations for this step. The way in which the sampling interval is used will be explained below. Figure 3.3-5 gives an example of the calculation. Take the estimate for the total number of households in the entire city (the last entry in Column 4 of the last page of Form A) and divide this number by 100. Carry out the division to two decimal places. Call this sampling interval K.

STEP 2 – Split "Oversized" Blocks

Any blocks which have an estimated MOS (Column 3 of Form A) greater than the cluster sampling interval, K, are "oversized" and must be split. How to split oversized blocks is illustrated in Figure 3.3-6. In this example, K is 258.66, and therefore block #20-206 is oversized. There are three considerations in splitting blocks:

a. The block must be split so that the number of households in each section of the block is smaller than the cluster sampling interval K.

b. The block must be split, as much as possible, along natural boundaries or easily discernible boundaries so that it will be possible for the lister to identify a selected section of a block in the field.

c. The splitting of the MOS for the block is a matter of best judgment. Consider the distribution of households on the block and the type of land use in that area.

Once a block has been split, each section should be renumbered as indicated in the example. Each of these sections is considered a unique block so that when clusters are selected, one section of a block may be chosen for the sample, while the other section may not be chosen. In an extreme case, a block may be split into more than two sections.

FORM B-1

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

- Calculate the sampling interval K by dividing the total number of estimated households (i.e., cumulative MOS) by 100:

$$K = \frac{25,866}{100} = 258.66$$

Additions **Truncated #**

1. Take the random number R = C1 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

2. Add K to C1:
Write K here + ________

The sum = C2 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

3. Add K to C2:
Write K here + ________

The sum = C3 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

4. Add K to C3:
Write K here + ________

The sum = C4 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

Figure 3.3-5. Example Calculating Cluster Sampling Interval

FORM A

CLUSTER SELECTION WORKSHEET

Noise Zone 02

Area 7

Page 1 of 9

Column 1 Tract & Block #	Column 2 Estimate of Block MOS	Column 3 Updated Estimate of MOS	Column 4 Cumulative MOS	Column 5 Estimated MOS Range	Column 6 X
20 - 103	5	3	—	—	
" - 104	4	4	—	—	
" - 105	3	3	—	—	
" - 106	10	20 30	30	1 - 30	
" - 201	121	105	135	31 - 135	
" - 202	27	25	160	136 - 160	
" - 203	6	7	—	-	
" - 204	10	12 19	179	161 - 179	
" - 205	15	15	194	180 - 194	
" = ~~206~~ 206A 206B	~~300~~	~~320~~ 200 120	~~514~~ 394 514	195 - 394 ~~195 - 514~~ 395 - 514	
" - 301	15	16	530	515 - 530	
" - 302	5	5	—	—	
" - 303	6	6	—	—	
21 - 101	4	10 21	551	531 - 551	
• - 102	30	30	581	552 - 581	
" - 103	9	9	—	—	
" - 104	7	7 16	597	582 - 597	

Figure 3.3-6. Example Splitting "Oversized" Blocks

Before continuing to STEP 3, double-check the work in STEP 2 to verify that it is correct.

STEP 3– Choose a Random Start

To begin the selection of clusters, a random number must be selected from the Table of Random Numbers in Appendix C. As illustrated in Figure 3.3-7, the pages of random numbers have 10 rows of groups of numbers, and 10 columns of groups of numbers. Whoever does the selection of a random number will take the last two numbers of the zip code for his or her personal address (e.g., the last two numbers may be 31), and will locate the group of numbers in the row and column that correspond to these numbers. That is, the person will locate Row 3 and Column 1 on the page of random numbers, and in this way, a group of numbers is picked. All the numbers on the page that come before this selected group must be crossed out as indicated in the example. This gives a place to start on the page of random numbers; that is, beginning with the first number in the group, these random numbers will be used whenever a "random start" must be chosen. There are several rules about taking random numbers:

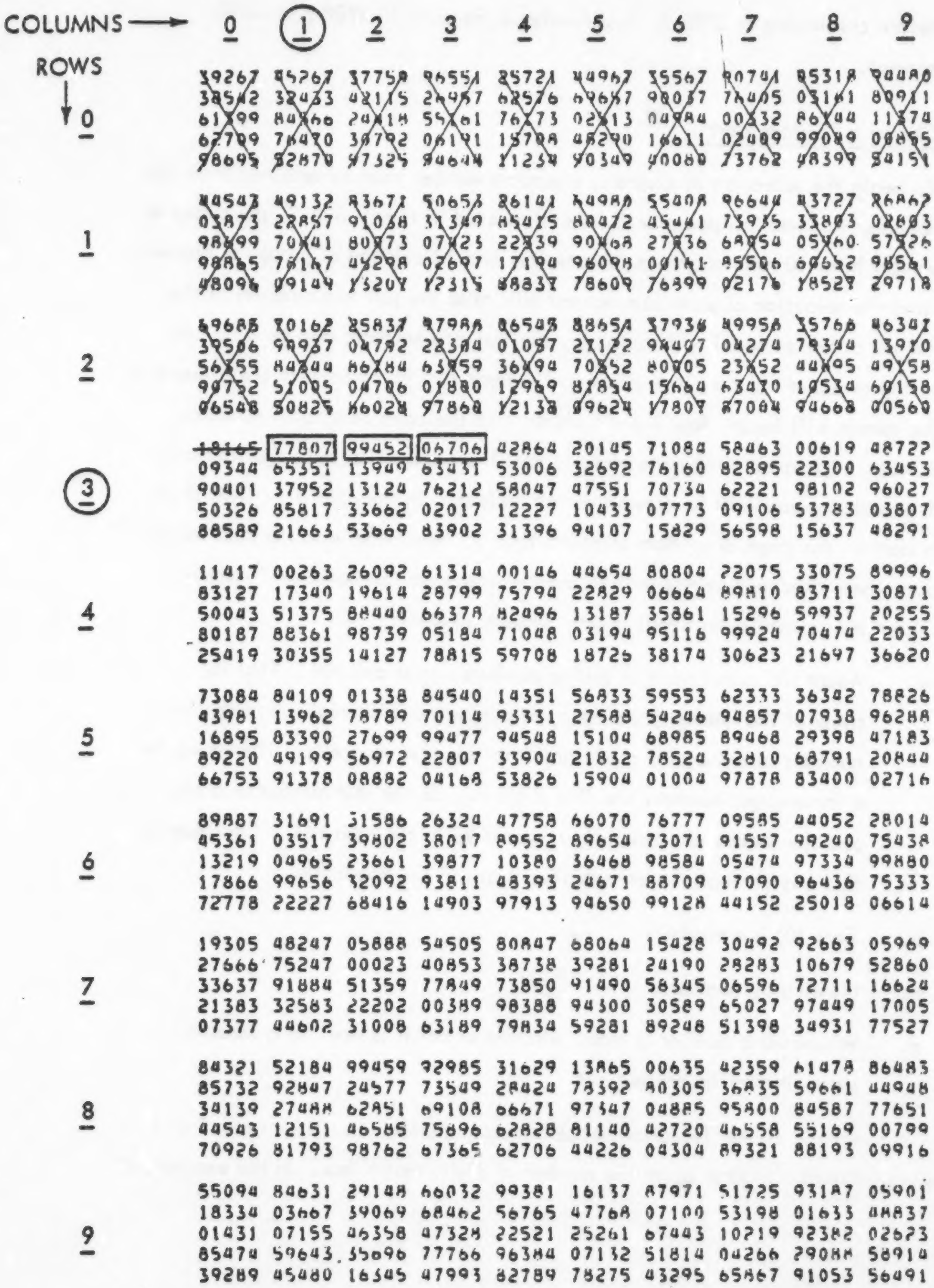
a. Adopt the convention of taking numbers across columns. That is, think of the numbers as a string of numbers and continue reading the numbers into the next group and into the next row; e.g., if looking for a three-digit number, the first digit may be the last number in a row and the second and third digits would be in the next row. Continue in this way through the consecutive pages of the appendix.

b. Zero (0) is a number.

c. Never skip numbers.

d. Whenever a number is read, whether or not it is used for a random start, it must be crossed out.

To begin the cluster selection, take a random number that is between 1 and the sampling interval K. First count the number of digits that K has. In the example of



COLUMNS → ROWS ↓	0	1	2	3	4	5	6	7	8	9
0	~~39267~~ ~~38542~~ ~~61399~~ ~~62709~~ ~~98695~~	~~95267~~ ~~32433~~ ~~84460~~ ~~76470~~ ~~52870~~	~~37750~~ ~~42115~~ ~~24818~~ ~~30792~~ ~~97325~~	~~96551~~ ~~24957~~ ~~55061~~ ~~06191~~ ~~94644~~	~~85721~~ ~~62576~~ ~~76273~~ ~~15708~~ ~~11254~~	~~44967~~ ~~69657~~ ~~02813~~ ~~46290~~ ~~90349~~	~~35567~~ ~~98037~~ ~~04984~~ ~~16611~~ ~~40080~~	~~80741~~ ~~76405~~ ~~00332~~ ~~02409~~ ~~73762~~	~~85318~~ ~~03161~~ ~~86144~~ ~~99089~~ ~~48399~~	~~94480~~ ~~80911~~ ~~11374~~ ~~08855~~ ~~54151~~
1	~~44543~~ ~~03873~~ ~~98699~~ ~~98865~~ ~~48096~~	~~49132~~ ~~22857~~ ~~70841~~ ~~76167~~ ~~09144~~	~~83671~~ ~~91058~~ ~~80973~~ ~~45298~~ ~~15207~~	~~50653~~ ~~31349~~ ~~07425~~ ~~02697~~ ~~12315~~	~~86141~~ ~~85415~~ ~~22539~~ ~~17194~~ ~~88837~~	~~64980~~ ~~80472~~ ~~90468~~ ~~96098~~ ~~78609~~	~~55408~~ ~~45441~~ ~~27836~~ ~~00161~~ ~~76399~~	~~96644~~ ~~73935~~ ~~68054~~ ~~85506~~ ~~02176~~	~~83727~~ ~~33803~~ ~~05460~~ ~~60652~~ ~~18527~~	~~26862~~ ~~02803~~ ~~57526~~ ~~98561~~ ~~29718~~
2	~~69685~~ ~~39506~~ ~~56355~~ ~~90752~~ ~~06548~~	~~70162~~ ~~99937~~ ~~84844~~ ~~51005~~ ~~50825~~	~~25837~~ ~~04792~~ ~~86284~~ ~~04706~~ ~~86028~~	~~97986~~ ~~22384~~ ~~63959~~ ~~01880~~ ~~97860~~	~~06543~~ ~~01057~~ ~~36494~~ ~~12969~~ ~~12138~~	~~88654~~ ~~27122~~ ~~70852~~ ~~81854~~ ~~09624~~	~~37936~~ ~~94407~~ ~~80005~~ ~~15664~~ ~~17807~~	~~49956~~ ~~04274~~ ~~23852~~ ~~63470~~ ~~87064~~	~~35766~~ ~~79344~~ ~~44895~~ ~~10534~~ ~~94668~~	~~46342~~ ~~13910~~ ~~49158~~ ~~60158~~ ~~00560~~
3	~~18165~~ 09344 90401 50326 88589	77807 65351 37952 85817 21663	99452 13949 13124 33662 53669	06706 63431 76212 02017 83902	42864 53006 58047 12227 31396	20145 32692 47551 10433 94107	71084 76160 70734 07773 15829	58463 82895 62221 09106 56598	00619 22300 98102 53783 15637	48722 63453 96027 03807 48291
4	11417 83127 50043 80187 25419	00263 17340 51375 88361 30355	26092 19614 88440 98739 14127	61314 28799 66378 05184 78815	00146 75794 82496 71048 59708	44654 22829 13187 03194 18726	80804 06664 35861 95116 38174	22075 89810 15296 99924 30623	33075 83711 59937 70474 21697	89996 30871 20255 22033 36620
5	73084 43981 16895 89220 66753	84109 13962 83390 49199 91378	01338 78789 27699 56972 08882	84540 70114 99477 22807 04168	14351 93331 94548 33904 53826	56833 27588 15104 21832 15904	59553 54246 68985 78524 01004	62333 94857 89468 32810 97878	36342 07938 29398 68791 83400	78826 96288 47183 20844 02716
6	89887 45361 13219 17866 72778	31691 03517 04965 99656 22227	31586 39802 23661 32092 68416	26324 38017 39877 93811 14903	47758 89552 10380 48393 97913	66070 89654 36468 24671 94650	76777 73071 98584 88709 99128	09585 91557 05474 17090 44152	44052 99240 97334 96436 25018	28014 75438 99880 75333 06614
7	19305 27666 33637 21383 07377	48247 75247 91884 32583 44602	05888 00023 51359 22202 31008	54505 40853 77849 00389 63189	80847 38738 73850 98388 79834	68064 39281 91490 94300 59281	15428 24190 58345 30589 89248	30492 28283 06596 65027 51398	92663 10679 72711 97449 34931	05969 52860 16624 17005 77527
8	84321 85732 34139 44543 70926	52184 92847 27488 12151 81793	99459 24577 62851 46585 98762	92985 73549 69108 75896 67365	31629 28424 66671 62828 62706	13865 78392 97347 81140 44226	00635 80305 04885 42720 04304	42359 36835 95800 46558 89321	61478 59661 84587 55169 88193	86483 44948 77651 00799 09916
9	55094 18334 01431 85474 39289	84631 03667 07155 59643 45480	29148 39069 46358 35096 16345	66032 68462 47328 77766 47993	99381 56765 22521 96384 82789	16137 47768 25261 07132 78275	87971 07100 67443 51814 43295	51725 53198 10219 04266 65867	93187 01633 92382 29088 91053	05901 48837 02623 58914 56491

Figure 3.3-7. Example Choosing a Random Start.

Figure 3.3-5, K has five digits (2, 5, 8, 6, 6). Therefore, a random number with five digits that is smaller than 25,866 must be chosen. In Figure 3.3-7, the first five-digit number in Row 3, Column 1, is 77807. However, since K has a decimal place, this number must be read with a decimal place and so it is 778.07. This number is greater than K; 778.07 is greater than 258.66. This five-digit random number cannot be used and it must be crossed out. We must look to the next five-digit number. It is 994.52 and is also greater than K and so it is crossed out. Finally, the next five-digit number, 067.06 (67.06), is between 1 and K. This becomes the random number used to start the selection process.

Once the random start is taken, write the random number in the space indicated on Form B-1. Call the number R.

Before continuing to STEP 4, double-check the work in STEP 3 to verify that it is correct.

STEP 4— Select Clusters

In this step, the process of selecting 100 clusters is presented. In some cases, the cluster which is selected will be a single block; in many instances in a small community, the cluster will be two or more linked blocks; and, in other cases, the cluster will be a section of a block. For convenience, we will use the term cluster to apply to all these possibilities.

Cluster selection requires calculating numbers for selection on Form B, the Worksheet for Cluster Sampling Interval. The selected numbers will be marked on Form A.

The selection of the first cluster is done by taking the random start, R, and "truncating" it to get a selection number. To truncate a number means to "cut off" the number at the decimal place so that it is a whole number. For example, truncating the random number 67.06 gives the number 67. The truncated random number is written on Form B under the column "Truncated #." See Figure 3.3-8 for an illustration. Do not worry if the random start, once truncated, becomes zero (0).

FORM B-1

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

- Calculate the sampling interval K by dividing the total number of estimated households (i.e., cumulative MOS) by 100:

$$K = \frac{25,866}{100} = 258.66$$

Additions **Truncated #**

1. Take the random number R = C1 = 67.06 truncate: 67 Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

2. Add K to C1:
Write K here + ________

The sum = C2 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

3. Add K to C2:
Write K here + ________

The sum = C3 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

4. Add K to C3:
Write K here + ________

The sum = C4 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

Figure 3.3-8. Example Truncating the Random Number

The truncated number is the first number for cluster selection and is located on Form A. In the example, the number 67 is located on Form A by looking in the "estimated MOS range" Column and an 'X' is marked in the last Column – "X". The X indicates that the cluster to which the number has been assigned is selected for the sample. See Figure 3.3-9 for an illustration. Since 67 falls between 31 and 135, block #20-201 is marked for selection. Remember that if a selected cluster is a set of linked blocks, then all the blocks in the linkage are chosen for the sample.

Note: If the truncated random number is zero (0), add the interval K to the random number R (before truncation). Enter this sum on line 1 of Form B and otherwise follow the directions for cluster selection.

The next 99 selections will be done by a systematic calculation of numbers for cluster selection. This requires using several consecutive pages of Form B. Figure 3.3-10 illustrates the calculations. In the column "Additions," the cluster sampling interval K is added to the random number 67.06 (NOT the truncated number 67). This gives a sum C2, 325.72. This number is truncated. The truncated number is written in the column "Truncated #" and this is the second number for cluster selection. Next, the interval is added to the sum C2, 325.72 (NOT the truncated number) and this gives a sum C3, 584.38. This number is truncated and the truncated number is written in the second column. This is the third number for cluster selection. Each truncated number in the "Truncated #" column is a selection number and is located on Form A. An 'X' is marked to indicate that the cluster to which the number has been assigned is selected for the sample.

Study the illustration in Figure 3.3-10 carefully. Be sure that you understand when to truncate numbers and when to add the numbers that are not truncated. Truncated numbers are used only in the "Truncated #" column. In the "Additions" column, numbers are not truncated.

Continue the procedure until 100 selections have been made.

Before continuing to Section 3.3.3, double-check the work in STEP 4 to verify that it is correct.

CLUSTER SELECTION WORKSHEET

Noise Zone 02

Area 7

Page 1 of 9

Column 1 Tract & Block #	Column 2 Estimate of Block MOS	Column 3 Updated Estimate of MOS	Column 4 Cumulative MOS	Column 5 Estimated MOS Range	Column 6 X
20 - 103	5	3	—	—	
" - 104	4	4	—	—	
" - 105	3	3	—	—	
" - 106	10	20 30	30	1 - 30	
" - 201	21	105	135	31 - 135	X
" - 202	27	25	160	136 - 160	
" - 203	6	7	—	—	
" - 204	10	12 19	179	161 - 179	
" - 205	15	15	194	180 - 194	
206A " = ~~206~~ 206B	~~300~~	200 ~~320~~ 120	394 ~~514~~ 514	195 - 394 ~~195 - 514~~ 395 - 514	X
" - 301	15	16	530	515 - 530	
" - 302	5	5	—	—	
" - 303	6	6	—	—	
21 - 101	4	10 21	551	531 - 551	
" - 102	30	30	581	552 - 581	
" - 103	9	9	—	—	
" - 104	7	7 16	597	582 - 597	X

Figure 3.3-9. Example Making Cluster Selections (page 1)

FORM A

CLUSTER SELECTION WORKSHEET

Noise Zone 02

Area 7

Page 2 of 9

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Tract & Block #	Estimate of Block MOS	Updated Estimate of MOS	Cumulative MOS	Estimated MOS Range	X
21 - 105	17	24	621	598 - 621	
22 - 204	220	220	841	622 - 841	
" - 205	5	~~5~~	–	–	
" - 206	3	[illegible]	–	–	
" - 207	3	~~3~~ 16	857	842 - 857	X
25 - 101	6	~~7~~	–	–	
" - 102	8	~~10~~ 17	874	858 - 874	
" - 103	10	~~10~~	–	–	
" - 104	9	~~9~~ 19	893	875 - 893	
" - 105	185	185	1078	894 - 1078	
26 - 201	13	~~10~~	–	–	
" - 202	9	~~4~~	–	–	
" - 203	7	~~7~~ 21	1099	1079 - 1099	
" - 204	45	45	1144	1100 - 1144	X
" - 205	60	60	1204	1145 - 1204	
" - 206	30	~~8~~	–	–	
" - 207	19	~~29~~ 37	1241	1205 - 1241	

Figure 3.3-9 (continued) - page 2

FORM B-1

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

- Calculate the sampling interval K by dividing the total number of estimated households (i.e., cumulative MOS) by 100:

$$K = \frac{25,866}{100} = 258.66$$

Additions **Truncated #**

1. Take the random number R = C1 = 67.06 truncate: 67 Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

2. Add K to C1:
Write K here +258.66

The sum = C2 = 325.72 truncate: 325 Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

3. Add K to C2:
Write K here +258.66

The sum = C3 = 584.38 truncate: 584 Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

4. Add K to C3:
Write K here +258.66

The sum = C4 = 843.04 truncate: 843 Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

Figure 3.3-10. Example Calculating Cluster Selections

3.3.3 Listing and Numbering Selected Clusters

On Form C, the selected clusters will be listed and assigned cluster numbers. Begin with the first page of Form A and go through all the pages, taking the information for each selected cluster and transferring it to Form C. In Column 1, write the Noise Zone code number for the selected cluster. In Column 2, write the Area code number. In Column 3, write the tract and block number(s) for the cluster. Be sure to list all the blocks for a cluster with linkages. In Column 4, write the "Updated Estimate of MOS" from Column 3 of Form A. See Figure 3.3-11 for an illustration. Once the selected cluster is listed on Form C, it is automatically assigned the "Cluster Number" which is given in Column 5 of the form. This number will be used to refer to the selected cluster from this point through the sampling, field, coding and data analysis procedures.

Double-check the work to verify that it is correct.

NOTE: The sample design will select clusters which represent every Area. However, since there is a larger number of noise zones than areas, and since their definitions are so specific, it is possible that the sample will not include clusters within every single noise zone, or that only a very few clusters will be chosen from a particular zone. This will in no way affect the reliability and accuracy of the survey results.

If, however, there is a pressing reason to obtain data from a noise zone which was not sampled, or to obtain additional data from a zone which was minimally sampled, refer to Appendix D for instructions for taking a special sample. Take this special sample only if the information is crucial. The data gathered on the basis of the survey design will provide a substantial and reliable analysis of community attitudes toward noise in the various noise environments.

FORM C-1

LIST OF SELECTED CLUSTERS

Page 1 of 4

Column 1 Noise Zone	Column 2 Area	Column 3 Tract & Block(s) #	Column 4 MOS	Column 5 Cluster #
01	1	4-102	20	001
01	1	6-305	21	002
01	2	9-206	15	003
01	3	13-303, 304, 305	21	004
01	4	15-102A	110	005
01	6	31-405, 406	25	006
02	7	20-201	105	007
02	7	20-206A	200	008
02	7	21-103, 104	16	009
02	7	22-205, 206, 207	16	010
02	7	26-204	45	011
02	6	30-401	50	012
02	5	18-201, 202	18	013
02	4	14-102	35	014
02	3	11-201, 202, 203	16	015
02	2	7-408	28	016
02	2	8-103	60	017
02	1	3-206	45	018
03	1	3-504	90	019
03	3	12-201, 202	28	020
03	4	14-501	38	021
03	5	17-305, 306, 307	16	022
03	6	29-208	26	023
04	7	36-301, 302	15	024
04	6	29-101, 102	31	025

Figure 3.3-11. Example Listing Selected Clusters

3.4 Listing Households

This section will discuss how to prepare for listing operations, how to conduct lister training, and how to manage and complete the listing procedures. Instructions will be given on how to use Forms D, E, F, and G, and the Listing Handbook, in Appendix E.

Begin the listing operations by obtaining the materials which are listed in Section 2.4. Make certain that the materials are ready when they are needed; training materials, for example, should be prepared in advance so that listers may study them before the training session.

The five listers will be required to attend a 1-1/2 day training session and the listing procedure should take no longer than 2 weeks. It is advisable to have a training staff of two to three persons, and to obtain as many assistants as possible to help prepare maps and listing forms.

Be sure to carefully read the Listing Handbook.

3.4.1 Preparation of Maps and Listing Forms for Selected Clusters

Locate each selected cluster on a detailed street map of the city. If possible, refer to an aerial photo to give more precise details. For each cluster, prepare a map on Form D. First list the identifying streets, or boundaries, of the cluster. Then sketch the block(s) which is (are) within the boundaries and designate any block segment(s). Finally, indicate all the areas in the cluster which are to be listed by marking an 'X' where the lister should begin, and arrows to show how to proceed. Do this in a very precise manner so that the lister has the correct instructions. Generally, for a simple block, mark an 'X' in the most northwest corner of the block and use arrows to indicate the clockwise direction. However, the instructions will be more complex in the case of linked blocks (contiguous or non-contiguous), or in the case of a block segment or segments. In the case of linked blocks, be sure to indicate the order in which the blocks are to be listed by assigning each block a number on the map. In the case of a block segment(s), the instructions should clearly indicate which areas to list and which not to list. The Listing Handbook provides illustrations for listing five different types of clusters (Figures E-1 through E-5). Study these carefully. Figure 3.4-1 illustrates how to prepare a cluster map for a simple block.

In addition, a Listing Form (Form F) and the appropriate number of continuation pages must be prepared for each cluster. On page F-1 indicate the cluster #, page numbers, and the lister's name. Use the estimated MOS from Form C to determine how many pages of Form F will be needed for each cluster; however, it is good to provide extra space in case the actual number of households is greater than anticipated. Indicate the cluster # and page numbers on the continuation pages.

3.4.2 Lister Training

Prepare for Lister Training

Prepare copies of the Listing Handbook for each lister and assign them to listers before the first day of training. Have them read the book and study the instructions carefully while the staff prepares for the sessions. Obtain lister ID cards or badges, letters of identification, and extra copies of Forms D, E, and F for the training procedures.

The training team should begin their preparation by discussing the Listing Handbook instructions page by page. Then two areas should be chosen for practice listing – one simple block, and one more complicated area (either linked non-contiguous blocks, or blocks with alleys, etc.). The staff should prepare maps (Form D) and Listing Forms (Form F) for the blocks, and proceed to the areas to list the designated households. While in the areas, the team should also make sketches of the areas on the sketch sheet (Form E). After completing the listing, the staff should discuss the procedures and problems encountered, and prepare copies of these practice materials to present during the training session. In addition, select several blocks which can be listed for training purposes. Be sure that you do not choose areas selected for the sample for any practice procedures.

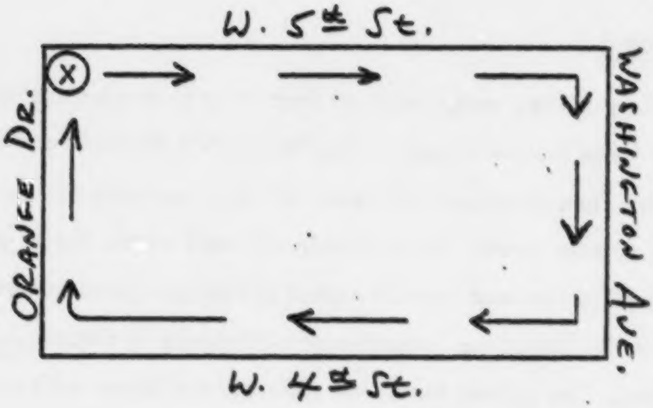
FORM D

IDENTIFYING STREETS AND MAP OF SELECTED CLUSTER

Cluster # 024

Surrounding Streets: ORANGE DR.
W. 5th St.
WASHINGTON AVE.
W. 4th St.

Lister DAVID JONES


W. 5th St.
ORANGE DR.
WASHINGTON AVE.
W. 4th St.
X

Place an 'X' on the most northwest corner and an arrow indicating the clockwise direction.

Figure 3.4-1. Example Lister's Map

Training – Day 1

The morning session for Day 1 should be spent in the office. Begin by carefully going over the instructions given in the Listing Handbook. Make sure that the listers have read and understood the handbook, that they realize the necessity for precise and thorough work, and that they are familiar with the purposes of Forms D, E, and F. Use the practice materials prepared to illustrate the listing process. Discuss and answer questions.

In the afternoon, the staff and all listers should locate a selected area on the city map, and proceed to the area to list the households. Perform the entire listing as a team, alternating the role of lister, and discussing the process as it is underway. Return to the office and discuss the practice listing.

Send the listers home and ask them to continue to study the instructions.

Training – Day 2

When the listers arrive, assign each of them an area to practice listing and provide them with the forms they will need. Send them into the field and plan to have them return in sufficient time to discuss with each of them how they did the listing, answer questions, and correct errors. In reviewing the work of the listers at this point, be sure to emphasize the most crucial aspect of listing – thoroughness. It is absolutely critical that the listers use initiative and diligence in finding every single household in the cluster. The Listing Handbook provides the listers with clues and tips for doing this; however, they will have to be industrious in developing their own methods for locating households. Stress these issues of thoroughness, persistence, and ingenuity when giving feedback on practice work.

In the afternoon, the listers will be given their assignments and they can begin to list the households on selected clusters.

3.4.3 Management of Listing Operations

Assignment of Selected Clusters to Listers

At the first assignment, give approximately three clusters to each lister. As the operations proceed, you can assign more clusters at a time. When giving out the assignments, discuss the locations of the clusters with the listers to be sure they know where they are going. Use the maps and aerial photo for assistance.

The assignments must be logged on the Listing Log Sheet (Form G). Column 1 indicates the cluster number; Column 2 gives the lister's identification (name, or initials, or number, etc.); and Column 3 indicates the date on which the assignment was given. Record the information in Columns 2 and 3 when giving assignments. Figure 3.4-2 illustrates the use of the Log Sheet.

Management Issues

The listing operations must be carefully supervised to ensure that the procedures are done correctly. The first management issue is making certain that listers locate the correct area, and they understand the instructions for listing. You will probably receive many calls and questions about how to find the assigned area.

The second issue is checking and validating the work to make sure that it has been done both thoroughly and correctly. You will need to spot-check each lister occasionally, especially in the early stages, to review the work. Additionally, go over the forms for each cluster as they are brought in so that problems and errors can be cleared up promptly.

The third issue is organization. The listing for each cluster must be logged in Column 4 of the Log Sheet. After the work has been carefully checked, Column 5 of the Log Sheet should be marked. Figure 3.4-2 illustrates how to record these procedures. In addition, keep track of any sketches provided by the listers on Form E so that you may give more precise information to interviewers.

FORM G-1

LISTING LOG SHEET

Page 1 of 4

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Cluster #	Lister	Logged Out	Logged In	Checked	# of Households	# of Selections
001	S. Brown	5/24	5/25	✓	18	
002	S. Brown	5/24	5/26	✓	23	
003	S. Brown	5/24	5/25	✓	34	
004	S. Brown	5/24	5/26	✓	8	
005	S. Brown	5/24	5/27	✓	51	
006	S. Brown	5/24	5/28	✓	14	
007	S. Brown	5/24	5/25	✓	32	
008	S. Brown	5/24	5/28	✓	19	
009	S. Brown	5/24	5/26	✓	24	
010	S. Brown	5/24	5/27	✓	20	
011	B. Davis	5/25	5/26	✓	35	
012	B. Davis	5/25	5/26	✓	18	
013	B. Davis	5/25	5/27	✓	17	
014	B. Davis	5/25	5/28	✓	10	
015	B. Davis	5/25	5/26	✓	45	
016	B. Davis	5/29	5/30	✓	34	
017	B. Davis	5/29	6/2	✓	19	
018	B. Davis	5/29	6/2	✓	28	
019	B. Davis	5/29	6/1	✓	21	
020	B. Davis	5/29	5/30	✓	13	
021	L. Rossi	5/26	5/28	✓	28	
022	L. Rossi	5/26	5/28	✓	32	
023	L. Rossi	5/26	5/27	✓	37	
024	L. Rossi	5/26	5/27	✓	19	
025	L. Rossi	5/26	5/28	✓	15	

Figure 3.4-2. Example Listing Log Sheet

The final task of the listing operation is to record the total number of actual households on each cluster. Go through the Listing Forms for each cluster, take the total number of households and write it in Column 6 of the Log Sheet on the line for that cluster. See Figure 3.4-2 for an illustration. This information will be used in the next stage of the sample selection procedures. Column 7 of the Log Sheet will be filled in after the household selections are made in Section 3.5.

3.5 Household Selection

This section provides instructions for the selection of households for interviewer contact. Forms F and H will be used for this procedure. For each cluster, a sampling interval for household selection will be calculated on the basis of the expected number of households for that cluster (the updated MOS measure). The sample is designed to select seven households from each cluster. However, the number of selections will be greater or less than seven if the actual number of households listed for the cluster is greater or less than expected. This variation in the number of selections is a feature of the sample design which adjusts for housing unit construction or demolition.

3.5.1 Calculation of the Household Sampling Interval

(This procedure is followed for each of the 100 clusters)

For each cluster, prepare a copy of Form H, using information from Form C which lists the selected clusters. Indicate the cluster number on Form H, and the "Expected Number of Households" which is the MOS measure. Calculate the household sampling interval S by dividing the MOS, called 'X' by 7. See Figure 3.5-1 for an example. S may be rounded to one decimal place to make calculations easier. Calculate the 100 different sampling intervals for the 100 clusters.

3.5.2 Selection of Households

(This procedure is followed for each of the 100 clusters)

STEP 1– Calculate the Approximate Number of Selections

If the actual number of households listed in the field is greater or less than the expected number by at least the size of S for that cluster, then the number of selections for the cluster will be greater or less than seven. It is possible to calculate the approximate number of selections that will be made for any cluster (approximate because the random start can mean a difference of plus or minus 1 selection). From the Listing Log Sheet (Form G) take the actual number of households for each cluster and write it on Form H for that cluster in the space indicated. Divide this number, called 'Y', by S to give N.

Figure 3.5-1. Example Calculating Household Selections

FORM H-1

WORKSHEET FOR HOUSEHOLD SAMPLING INTERVAL

Cluster # 003

EXPECTED NUMBER OF HOUSEHOLDS (from Column 4 of Form C)

ACTUAL NUMBER OF HOUSEHOLDS (from Column 6 of Form G)

$X = 20$

$Y = 34$

- Calculate the sampling interval S:

$$S = \frac{X}{7} = \frac{20}{7} = 2.85$$

- Round this number to 1 decimal place:

$S = 2.9$

- Calculate the approximate number of household selections N:

$$N = \frac{Y}{S} = \frac{34}{2.9} = 11.7$$

Additions — Truncated #

1. Take the random number R = H1 = 1.0 truncate: 1 — Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

2. Add S to H1:
Write S here +2.9
The sum = H2 = 3.9 truncate: 3 — Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

3. Add S to H2:
Write S here +2.9
The sum = H3 = 6.8 truncate: 6 — Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

4. Add S to H3:
Write S here +2.9
The sum = H4 = 9.7 truncate: 9 — Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

Figure 3.5-1. Example Calculating Household Selections (Continued)

WORKSHEET FOR HOUSEHOLD SAMPLING INTERVAL

		Additions		Truncated #	
	H4 =	9.7			
5.	Add S to H4: Write S here	+ 2.9			
	The sum = H5 =	12.6	truncate:	12	Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.
6.	Add S to H5: Write S here	+ 2.9			
	The sum = H6 =	15.5	truncate:	15	Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.
7.	Add S to H6: Write S here	+ 2.9			
	The sum = H7 =	18.4	truncate:	18	Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.
8.	Add S to H7: Write S here	+ 2.9			
	The sum = H8 =	21.3	truncate:	21	Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.
9.	Add S to H8: Write S here	+ 2.9			
	The sum = H9 =	24.2	truncate:	24	Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.
10.	Add S to H9: Write S here	+ 2.9			
	The sum = H10 =	27.1	truncate:	27	Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

Figure 3.5-1. Example Calculating Household Selections (Continued)

WORKSHEET FOR HOUSEHOLD SAMPLING INTERVAL

Additions Truncated #

H10 = 27.1

11. Add S to H10:
Write S here + 2.9

The sum = H11 = 30.0 truncate: 30 Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

12. Add S to H11:
Write S here + 2.9

The sum = H12 = 32.9 truncate: 32 Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

13. Add S to H12: SELECTION STOPS HERE.
Write S here + 2.9

The sum = H13 = 35.8 truncate: ~~35~~ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

14. Add S to H13:
Write S here + ______

The sum = H14 = ______ truncate: ______ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

15. Add S to H14:
Write S here + ______

The sum = H15 = ______ truncate: ______ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

16. Add S to H15:
Write S here + ______

The sum = H16 = ______ truncate: ______ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

See Figure 3.5-1 for an example. N tells approximately how many household selections will be made for that cluster. You can use this figure to check your work once you have calculated all the selections for the cluster.

STEP 2— Take a Random Start

Following the rules outlined in Section 3.3.2 (STEP 3, a. through d.), take a random number between 1 and S, the household sampling interval. For the random start, begin with the digits just following the numbers used for cluster selection. Call the number R and write it on Form H in the space indicated.

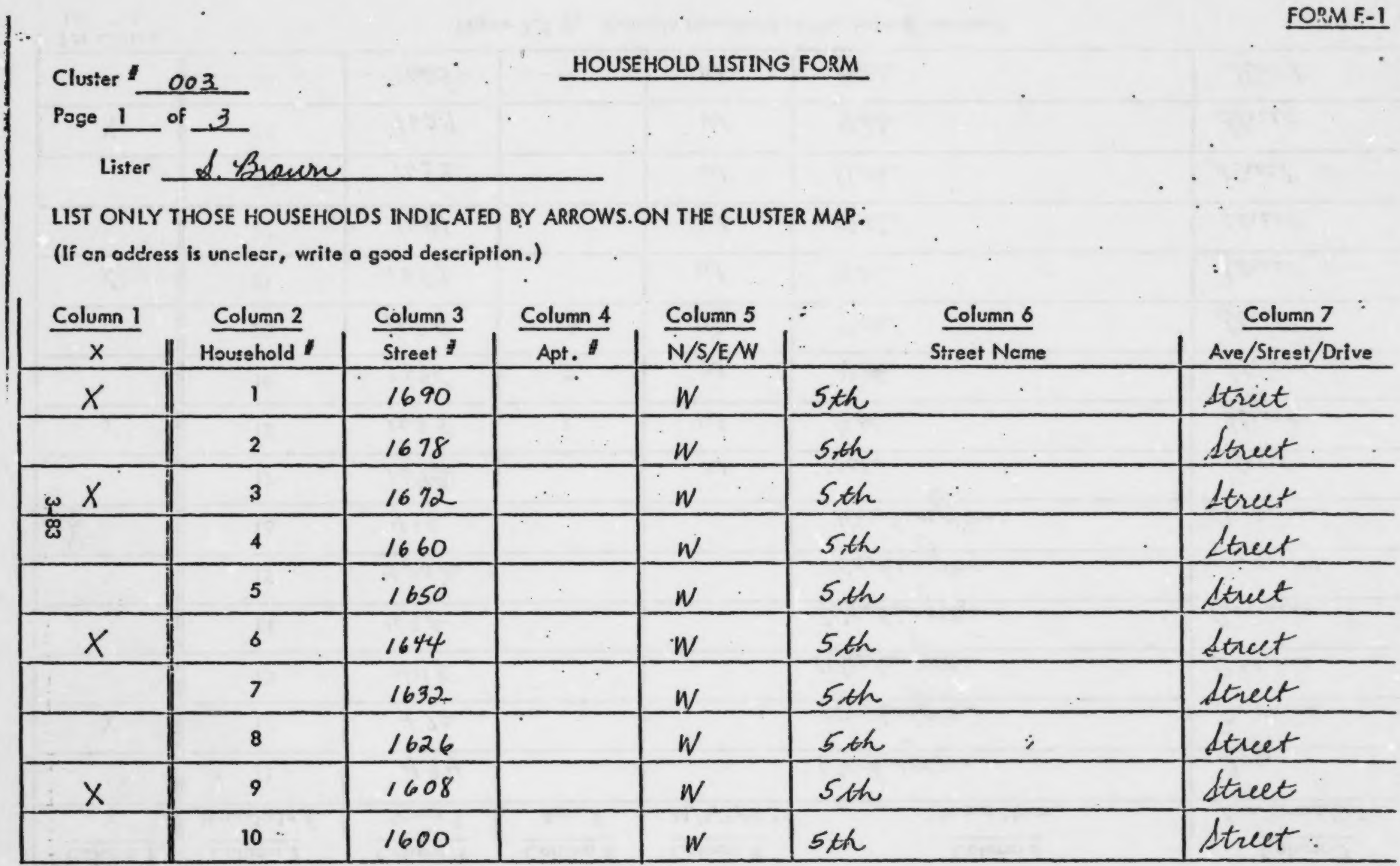
STEP 3 — Select Households

The first number for household selection is taken by truncating the random number R. See Figure 3.5-1 for an illustration. The next selections will be done by the same systematic calculation of numbers that was used in Section 3.3.2 for cluster selection. After determining all the selections for the clusters, check the total number of selections with the approximation, N. If you have not calculated N (±1) selections, then you have made an error in the work. Check the additions and correct the mistake.

> Note: If the truncated random number is zero (0), add the interval S to the random number R before truncation. Enter this sum on line 1 of Form H and otherwise follow the directions for household selection.

Each household selection must be marked on the Listing Form for the cluster. In Column 2 of the Listing Form, household numbers are printed. In the example in Figure 3.5-1, the selected household is 1 and the first line is marked in Column 1 of the Listing Form. See Figure 3.5-2 for an illustration of marking the Listing Form. The X in Column 1 indicates that the first household is chosen for interviewer contact. Mark each selected household number on the Listing Form for the cluster.

Before continuing to STEP 4, double-check the work in STEP 3 to verify that it is correct.



FORM F-1

HOUSEHOLD LISTING FORM

Cluster # 003

Page 1 of 3

Lister S. Brown

LIST ONLY THOSE HOUSEHOLDS INDICATED BY ARROWS ON THE CLUSTER MAP.

(If an address is unclear, write a good description.)

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
X	1	1690		W	5th	Street
	2	1678		W	5th	Street
X	3	1672		W	5th	Street
	4	1660		W	5th	Street
	5	1650		W	5th	Street
X	6	1644		W	5th	Street
	7	1632		W	5th	Street
	8	1626		W	5th	Street
X	9	1608		W	5th	Street
	10	1600		W	5th	Street

For Office
Use Only

Figure 3.5-2. Example Household Listing Form

FORM F-2

HOUSEHOLD LISTING FORM

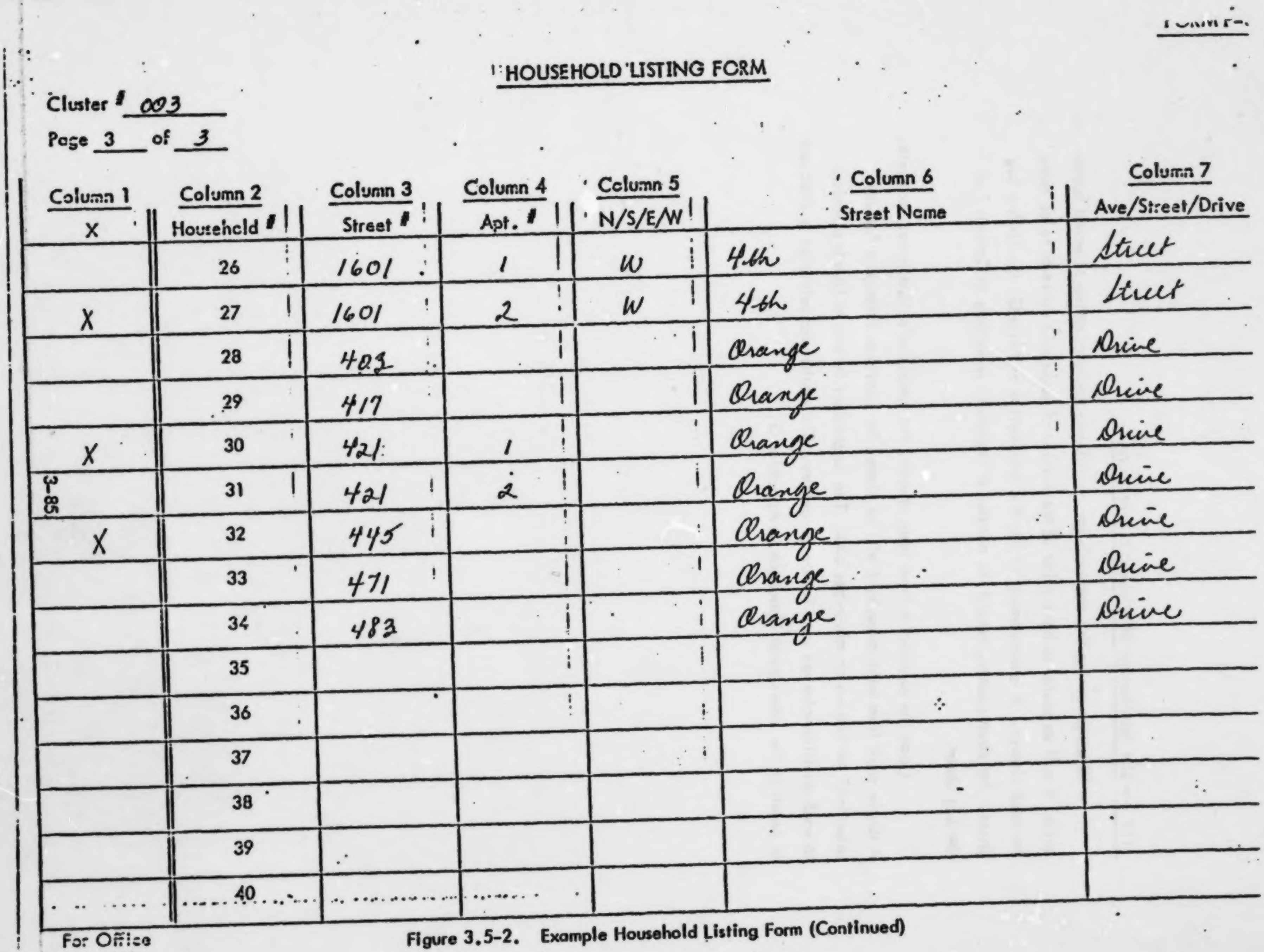
Cluster # 003

Page 2 of 3

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	11	494			Washington	Avenue
X	12	472			Washington	Avenue
	13	448			Washington	Avenue
	14	432			Washington	Avenue
X	15	420½			Washington	Avenue
	16	418			Washington	Avenue
	17	1693		W	4th	Street
X	18	1685	1	W	4th	Street
	19	1685	2	W	4th	Street
	20	1685	3	W	4th	Street
X	21	1657		W	4th	Street
	22	1641		W	4th	Street
	23	1633		W	4th	Street
X	24	1629		W	4th	Street
	25	1625		W	4th	Street

For Office Use Only

Figure 3.5-2. Example Household Listing Form (Continued)



HOUSEHOLD LISTING FORM

Cluster # 003

Page 3 of 3

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	26	1601	1	W	4th	Street
X	27	1601	2	W	4th	Street
	28	403			Orange	Drive
	29	417			Orange	Drive
X	30	421	1		Orange	Drive
	31	421	2		Orange	Drive
X	32	445			Orange	Drive
	33	471			Orange	Drive
	34	483			Orange	Drive
	35					
	36					
	37					
	38					
	39					
	40					

For Office Use Only

Figure 3.5-2. Example Household Listing Form (Continued)

STEP 4 — List the Number of Household Selections

When preparing the materials for interviewer contacts to the selected households, it will be useful to have a list of the number of household contacts to be made for each cluster. It is convenient to list this information on Form G, the Listing Log Sheet. For each cluster, record the number of household selections in Column 7 of the Log Sheet.

Once the households have been chosen, the sample selection is not complete. A single adult from each household will be chosen for interview through a "random selection" method which minimizes bias. The Respondent Selection Labels attached to each questionnaire are used for the procedure. The method for selection is discussed in detail in the Interviewer Handbook in Appendix G.

3.6 Preparation of Interview Cluster Kits and Letters of Introduction

This section gives instructions for preparing all the field materials which interviewers will use to locate the selected households and conduct the interviews. Maps must be prepared, labels must be organized, the questionnaires must be labeled and precoded, and other materials must be readied. An Interview Cluster Kit can then be assembled for each cluster. In addition, Letters of Introduction must be addressed so that they can later be mailed to selected households in advance of the interviewer contact.

The work described in this section is primarily a task of assembling and preparing materials. The instructions present a systematic method for organizing and carrying out the procedures.

3.6.1 Preparation of Interview Cluster Kits

STEP 1— Organize Materials

Organize the following materials which you already have for each cluster:

- Map of the Selected Cluster (Form D)
- Lister's Sketch of the Selected Cluster (Form E)
- Listing Form (Form F)

These materials will be used to prepare the Interviewer's Cluster Map (Form I) for each cluster.

All the interviewing materials (Appendix F) will be needed for the kits. The Respondent Selection Labels are included in Appendix F. They are to be printed on small gummed labels (ones that peel off easily) which will fit into the appropriate square on the first page of the questionnaire; i.e., no larger than 2 inches by 4 inches. The labels are called 01 through 12. You will notice that some of the labels are identical. Nevertheless, the labels must be printed in equal quantities. In addition, be sure to have the appropriate numbers of the remaining interviewing materials — Respondent Handcards, Informed Consent Statements, Call-Back Cards, and Thank-You Cards.

Finally, you will need Letters of Introduction and envelopes for mailing to each selected household.

STEP 2 – Prepare Respondent Selection Labels

A label will be assigned to each questionnaire in a systematic fashion such that label 01 will go on the first questionnaire; label 02 on the second; label 03 on the third; and so forth, through label 12; label 01 will go on the thirteenth questionnaire, etc. Therefore, once the labels have been printed in equal quantities, they must be placed in order from 01 through 12, then the next 12, and so forth until all the labels are ordered. Assemble the labels in 12 separate piles. Then take one label from each pile, in order, and reassemble them.

The Listing Log Sheet (see Columns 1 and 7, Form G) lists the number of households which will be contacted for each cluster. This, then, is the number of questionnaires and labels which will be prepared for the cluster. In order, from cluster 001 through 100, count out the necessary labels for each cluster. Put a paper clip or rubber band around each group of labels and attach a slip of paper which indicates the cluster number to which the set of labels is assigned. Once the labels for a cluster are banded, the count for the next cluster begins with the very next label. By grouping the labels in this way, the work of preparing questionnaires can be allocated to different staff members, and the preparation of cluster kits can proceed in any order.

STEP 3– Prepare Questionnaires

Questionnaires should be prepared for each of the 100 clusters, one cluster at a time. Keep the questionnaires for each cluster in the same order from the first through final procedure in STEP 3.

a. First, place a selection label on each questionnaire. Take the labels for that cluster and attach them, in order, to the questionnaires for the cluster.

b. Second, code sample properties on each questionnaire. On page i of the questionnaire there is a box like this:

NZ ____________
AR ____________
CL ____________
CTY____________

The NZ stands for the Noise Zone code number. The AR stands for the Area code number. The CL stands for the cluster number. The CTY stands for the city number; that is, each city conducting the survey is assigned a unique number by the Environmental Protection Agency. Write the NZ number as a two-digit code; that is, Noise Zone 01 is '01; Noise Zone 02 is '02', and so on. Write the AR number as a one-digit number. Write the CL number as a three-digit number; that is, Cluster 001 is '001', Cluster 045 is '045', and so on. Write CTY as a three-digit number.

c. Third, assign a unique Respondent # or ID # to each questionnaire. This number has five digits. The first three digits are the same as the cluster number. That is, all the ID #'s for the questionnaires in cluster 050 will have the same first three digits – '050'. The last two digits of the ID #, however, are assigned in the following manner. The first questionnaire is numbered '050-01'; the second questionnaire is numbered '050-02'; and so on until all the questionnaires in cluster 050 are numbered. For each cluster, begin assigning the last two digits of the ID# with '01' and continue through the highest number needed. Since the first three digits of the ID# are different for the questionnaires in different clusters, this process of assigning numbers gives each questionnaire, and each respondent, a unique ID number. Write the five-digit number in the space for "Respondent #." Then transfer the numbers into the boxes at the top of the right-hand column. For example:

	1	2	3	4	5
ID#	0	5	0	0	1

d. Fourth, write the address of the selected household on the questionnaire. Using the information on the Listing Form for each cluster, take the address of the household marked for selection and accurately transfer it into the appropriate space on the front of the questionnaire.

STEP 4 — Prepare Interviewer's Maps

An Interviewer's Map (Form I) must be prepared for each cluster. Using the map which was prepared for the Lister (Form D), and the sketch provided by the lister (Form E), if this was prepared, sketch the cluster and list the identifying streets on Form I. As much as possible, try to determine the approximate location of each selected household and mark each location with an 'X' on the map. Use the actual listing of addresses on the Listing Form to help you do this. Figure 3.6-1 illustrates an interviewer's map prepared for the cluster selections used as examples in Figures 3.4-1, 3.5-1 and 3.5-2. Finally, indicate any detailed information which the lister may have provided for locating the cluster or particular households, or for dealing with any problem situations which the interviewer might come across.

STEP 5 — Assemble Interview Cluster Kits

Prepare a kit of materials for each cluster by assembling the following items in a large manila envelope marked for the cluster. The actual number of items will be different for each cluster since the number of household selections varies:

- Questionnaires (one per household)
- Respondent Handcards (one set is sufficient for each interviewer)

FORM I

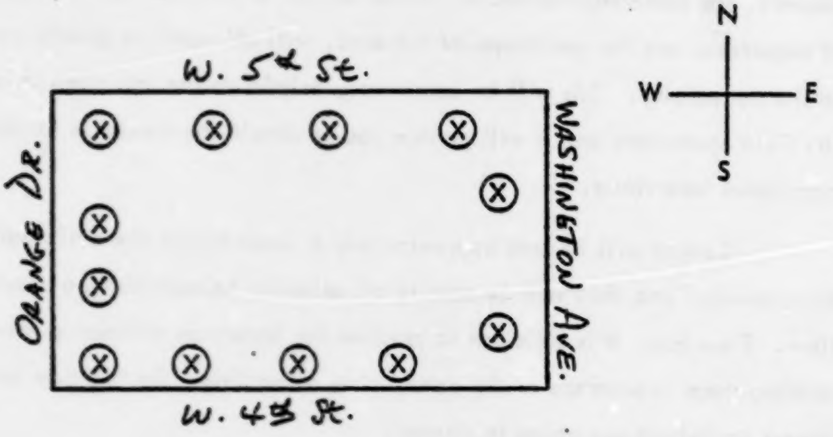
INTERVIEWER'S CLUSTER MAP

Cluster # 024

Surrounding Streets: ORANGE DR.
W. 5th St.
WASHINGTON AVE.
W. 4th St.

Interviewer: ALICE HOLZER ID# 16

The 'X's indicate the approximate locations of the households to contact.



Notes to Interviewer: West 5th St. is a one-way street going west, and West 4th St. is a one-way street going east. The 6th household, 420½ Washington Ave., is behind 418 Washington Ave., above the garage.

Figure 3.6-1. Example Interviewer's Cluster Map

- Informed Consent Statements (one per questionnaire)
- Thank You Cards (one per questionnaire)
- Call-Back Cards (one per questionnaire)
- The Interviewer's Map (Form I)

3.6.2 Preparation of Letters of Introduction

The Letter of Introduction serves to inform the residents of a selected household that they will be contacted to participate in the study. The model for the letter is presented in Appendix B and it should be modified, if necessary, to suit the community. Notifying the residents of the sponsorship of the study, the legitimacy of the interviewers, the scientific method of the collection of information, the confidentiality of responses, and the usefulness of the data, will all result in greater responsiveness in the community. This will be enormously helpful to the interviewers as they conduct the field operations and it will enable you to obtain the maximum response rate for completed interviews.

Letters will be sent approximately a week before the anticipated contact by interviewers, and they will be sent to all selected households in a cluster at the same time. Therefore, it is efficient to prepare the letters by addressing envelopes and stuffing them in advance of the actual time of mailing. Do this now and keep the letters organized according to cluster.

CHAPTER 4

Implementation of the Survey

4.0 INTRODUCTION

We will now discuss the implementation of the survey. Up to this point, you have been preparing for the survey - planning, organizing, obtaining materials, taking the sample, and preparing the questionnaires. It is important that these tasks be completed before the field operation is started because the time demands will be enormous. During the training period and during the first couple of weeks of the survey implementation, a large number of tasks and problems will have to be handled and you will need to be free of other tasks to do these. If you have completed the preparations for the survey, then proceed with the field operation.

The following procedures will be discussed:

1. Selection of Field Personnel;
2. Sending Introductory Letters to Selected Households;
3. Training of Field Personnel;
4. Allocating Household Assignments to Interviewers;
5. Managing the Field Operation;
6. Sorting Out Questionnaires for Editing and Coding;
7. Editing Questionnaires;
8. Validating Questionnaires;
9. Coding Questionnaires; and
10. Preparing Data for Keypunching.

The instructions separate the tasks from one another but many times they will be conducted simultaneously.

4.1 Selection of Field Personnel

It is very important to select good interviewers. Interviewing is a complex task and some people are just better at it than others. Good interviewers generally obtain higher acceptance rates than poor ones, and they tend to obtain more accurate and useful information. Good interviewers have the skills necessary to put a respondent at ease, to make him or her feel that the information obtained will be relevant and beneficial. One of the purposes during the training period will be to teach personnel the skills of being good interviewers. But personality dimensions play an important part as well, and the more carefully the applicants are screened, the more effective the survey implementation will be.

The operation of the survey will involve several different roles: interviewing, editing, validating, and coding. Practically, however, all personnel should be trained at the same time, because they will have to be totally familiar with the questionnaire and the procedures, whether they will be interviewers or not. Therefore, the selection and training of all personnel together will be assumed.

Given the resources of the study, there may not be the choice of selecting from a pool of applicants. Nonetheless, several qualifications should be met. In this way, people who would obviously be inappropriate may be eliminated. Useful information may be gained by reviewing an application form, but also try to talk to each applicant. An example application form is contained in Appendix H.

The application will indicate the following qualifications. First, the person must be at least 18 years of age. A survey is governed by certain legal constraints so that it is necessary to have adults doing the interviewing. Second, the person must be able to read and speak English fluently, and must be able to follow instructions. The completed application form can indicate deficiencies in any of these skills. Note that many of the questions in the application form are from the questionnaire. Third, the applicant should have a valid driver's license and an available car. Interviewers will have to visit clusters all over the city, at night as well as on weekends, and having constant access to a car is essential. Fourth, the person must be able to give sufficient time for the interviewing assignment. This means that the person must be able to attend the entire 5-day training session plus give at least 20 hours a week for the duration of the study.

It will be necessary, however, to also interview the applicants in order to screen out persons who might be inappropriate. It is difficult in a short interview to pick out "problems" that would affect interviewing, but there are several things to look for. The applicant should enjoy talking to people. You can gain a good idea of a person's ability to communicate after talking to him or her for a while, and certainly after the training period. If someone is very withdrawn and becomes inhibited while interacting with others, he or she will be a bad interviewer and may do more harm to the study than help (as well as costing your organization a lot of money). An applicant must be able to listen carefully to what other people are saying. Thus, if you sense that a person does not listen to others, then he or she will not be a good interviewer.

Pay particular attention to "negative personality traits" - traits which will put a potential respondent on the defensive. When the survey is well underway, you will start to notice certain patterns in your interviewers. You will notice that some interviewers consistently obtain high acceptance rates (e.g. they interview 80%-90% of the respondents they contact), while others have very low acceptance rates (e.g. less than 50%); a certain number of respondents will always refuse to be interviewed, but a good interviewer will obtain higher acceptance rates. The reasons are fairly clear; good interviewers present themselves openly, make the contact person or the respondent feel safe, and make them feel that the interview will be a worthwhile experience. On the other hand, people with "negative personality traits" will put the people they talk to on the defensive and make them less likely to give an interview or, if they agree, less likely to give accurate and full information. It is difficult to know how to measure applicants with these "negative personality traits", so you will have to rely on your intuition. When talking to an applicant, does the person come over as warm and open? Do you feel comfortable and good when you talk to him or her? Or does the person appear to be closed or make you feel closed? Pay attention to your feelings because they are good guides to what is happening in the interaction.

Another characteristic to consider when talking to applicants is their carefulness. Does the person take care to hear what you are saying, or think carefully when he or she talks? From the training session, you will notice that some interviewers are very careful about reading the questions and recording the answers, while others are careless - they may not read the question accurately, or may paraphrase the question. Carefulness is a very important trait for interviewers since the accuracy of the survey depends on it.

Finally, it may help to have individuals who have had previous experience in interviewing. However, previous experience does not necessarily make a good interviewer; many insensitive persons have been interviewers at one time or another.

The degree to which you can select your applicants will depend, of course, on the resources. However, even if there is not a large choice, do not allow obviously poor interviewers into the field; they may do more harm than good. The screening of personnel will continue through the training period. Some of the applicants will be chosen to be editors, validators or coders, so think in terms of sorting the people into these various tasks. Generally, people who make bad interviewers will also make bad editors, validators, or coders. But there are other grounds for selecting. Some applicants may be competent but may not present themselves very well (e.g., someone who has had a stroke or has a physical disability).

Pay careful attention to people while you are training them. While it is good for trainees to ask questions, if a person continually asks questions or makes "long-winded" statements, this may indicate the need for attention. This type of person will not make a good interviewer. Similarly, people who need constant communication with the training staff during and after sessions will probably not make very good interviewers; a continual need for reassurance may be a sign that the individual cannot work on his or her own. In addition, consider the speed at which people work. People who work too quickly may rush through the job carelessly and, therefore, obtain poor information. On the other hand, people who work too slowly may take so long to complete an interview that they become very expensive (when you cost their output over the length of the survey). Remember, you are working with a "work load" vs. "accuracy" trade-off. You want to complete the survey quickly and you want to keep accuracy as high as possible.

It is desirable to control some of the group characteristics of the interviewing pool. It is a good idea to have a balance between males and females. If there are any sizeable minority groups in the city; try to have minority interviewers to help increase the response rate of the survey. If there are any groups whose mother tongue is not English, then having native-speaking interviewers will be very useful. Check, however, that bilingual interviewers actually speak, read and record the language well.

4.2 Sending Introductory Letters to Selected Households

On the first day of the training session, you will have to complete a task that will be relevant on the last day. In Section 3.6.2 the introductory letter was discussed. The purpose of this letter is to prepare the selected households for the survey, thereby making it easier for the interviewers when they approach the household. These letters should be sent no later than a week before the interviewers will approach the household. It will be necessary to anticipate when particular clusters will be contacted so that the letters are mailed at the appropriate time. If the letters are sent too early, they are liable to lose their impact.

Before the first day of training, decide which clusters are to be contacted first. Since the training will take five days, interviewers will go out into the field at the end of the fifth day, so that the letters for the first batch of clusters should be sent the first or second day of training. From the attendance on the first day, you can estimate how many interviewers will be available for interviewing at the end of the training period and, therefore, how many clusters will be contacted.

After the first batch of clusters has been contacted, estimate when interviewers will be ready to start new clusters so that more letters can be sent. Generally it will take an interviewer a week to two weeks to finish a cluster. The process of sending introductory letters will be continued throughout the field operation until all clusters have been contacted.

4.3 Training of Field Personnel

One of the major tasks of the survey is the training of interviewers. It is essential that the interviewers, as well as the editor, validators and coders be trained in all aspects of the survey administration so that the data collection and its editing and coding are standardized. For this reason, the training session is a 5-day operation. A shorter training program will only lead to sloppy interviewing and many problems and will cost more in the long run in terms of time and money. Therefore, do not cut down on this period. Each applicant must attend all 5 days of training; otherwise he or she cannot become an interviewer.

Before beginning the training program, become very familiar with the questionnaire and the Interviewer's Handbook (Appendix G). This handbook gives detailed instructions on the questionnaire structure and interviewing skills, so that this discussion will not be repeated here. You must be thoroughly familiar with the questionnaire in order to teach other people how to use it.

A tentative schedule for the 5 days is as follows:

Day	Major Tasks	Preparation Work at Home
–	—	Read Interviewer Handbook before Day 1
1	General Introduction to Project; Ethics of the Project; Structure of the Questionnaire; Go Over the Questionnaire Break into Small Groups, Pair Off, and Practice One Interview;	
–	—	Re-Read Interviewer Handbook
2	Break into Small Groups; Practice Interviewing All Day with Staff Monitoring Interviews; Aim is to Learn Questionnaire Structure; Turn-in Afternoon's Interviews;	
–	—	Practice Interview at Home on Relative or Friend
3	Practice Interviews from Home Turned-in; Staff Return Yesterday's Questionnaires with Individual Feedback; Introduce Use of Call Record Sheet and Informed Consent Statement; Break into Small Groups; Continue Practice Interviews All Day;	
–	—	Practice Interview with Stranger – not in cluster

Day	Major Tasks	Preparation Work at Home
4	Practice Interviews with Stranger Turned-in; Staff Return Yesterday's Questionnaires with Individual Feedback; Discussion of Expectations; Practice Door-Step Introductions; Continue Practice Interviews;	
—	—	Write Down Feelings About Training Session, Anxieties, Hopes about Going Into Field, Expectations, etc.
5	Discuss Expectations, Anxieties, Hopes; Give Back Yesterday's Questionnaires with Individual Feedback; Give Out Interviewing Assignments; Review Materials in Kit.	

The training schedule is a tight one and involves a great deal of work on both the staff and trainees' part. We suggest that each day be a 6-hour work period in order to accomplish what is necessary. Three goals are emphasized during the training period.

1. Ethics of Research and Professional Behavior.
2. Correct Interviewing Procedures.
3. Good Interviewing Skills.

4.3.1 Ethics of Research and Professional Behavior

There are two basic values which underlie this survey: objectivity and ethical responsibility. It is essential that you accept these values and impart them to the trainees during training.

A commitment to objectivity means that you wish to understand the attitudes of the residents of the community in a scientific and unbiased manner. Whatever the residents of the community think, report these attitudes and opinions accurately, irrespective of whether they agree with yours or not. The purpose of a public opinion survey is, after all, to obtain information on what the public thinks. You must be absolutely committed to obtaining this information in as accurate a manner as possible.

Practically, this commitment to objectivity has several components. First, respondents are selected as objectively as possible in order to represent the population of the city as a whole. Second, the procedures attempt to reduce bias in interviewing. For example, training is done in order to standardize interviewer procedure, and quality control tests are carried out to minimize errors. All staff, interviewers, editors, validators and coders should be committed to objectively obtaining information.

A commitment to ethical responsibility, on the other hand, is a commitment to professionalism. The individuals who will be interviewed in this study, the respondents, are doing the city a favor by giving their opinions on noise and other community problems. Their rights are a matter. of primary concern. Certain ethical obligations are created for the research staff and you should be explicitly aware of them at all times. The Interviewer Handbook spells these out in greater detail; however, to summarize, there are four basic rights which must be guaranteed to the respondents of your survey:

1. The respondent has a right to have his or her answers kept confidential. No data are released which would permit any respondent to be identified individually. Further, take care that there is no gossip about individuals. Even casual information obtained, expressed without reference to an individual's name, can allow other people to identify the respondent.

2. The respondent has a right to be treated with respect and dignity. A respondent's answer must be accepted openly and honestly by the

research team. The researchers have no right to judge a respondent's answers, to poke fun at an answer, to disagree with an answer, or to misinterpret an answer.

3. The respondent has a right not to be exploited in any way. The interviewer or research staff must not take advantage of a respondent in any way. The respondent is, after all, doing the city a favor by giving his or her time and effort.

4. The interviewers and research staff have an obligation to maintain a professional role during the course of the research. There must be no attempt to contravene the purpose of the survey by providing information or services or becoming involved in the activities of the respondent or his or her family. If for some reason a member of your staff comes into a conflict between the researcher's role and another role (e.g., having to interview a friend or relative), you should intervene in order to maintain the professional relationships.

These four ethical precepts are a set of rules designed to guarantee the rights of the respondents. Giving this protection explicitly will also help to legitimize the survey. If people feel they are being treated with respect and dignity, that their answers are confidential, that the study is legitimate, and that the interviewers and staff will not exploit them, then they will be more willing to participate in the study and will probably be more supportive of the survey and its results. This will help the implementing of the study rather than harm it. Remember that "good will" is an essential part of any research and that a commitment to ethical responsibility is a way of establishing "good will".

4.3.2 Correct Interviewing Procedures

It is essential to continually emphasize that there is one, and only one, correct interviewing procedure. Otherwise, interviewers are liable to get the idea that they can improvise when they want. In being a bit "disciplinarian" about insisting on correct procedures, you may receive some emotional feedback from trainees while they are learning. However, tight control of procedures will instill RESPECT FOR THE VALIDITY OF THE SURVEY. Therefore, make sure to insist on the absolute correctness of the interviewing procedures.

1. The Call Record Sheet must be filled out correctly. A complete history of all contact attempts should be registered, as well as the correct codes. If a non-interview occurs, pages ii and iii should be filled out completely.

2. There is only ONE correct respondent. The Respondent Selection Label will tell the interviewer whom should be interviewed from the household. There are to be NO substitutions. This means that the interviewers will have to know how to read the selection label as well as how to correctly fill out the roster on page vi.

3. Interviewers must learn to give the Informed Consent Statement after the respondent agrees, and have the respondent sign the form. This is a government requirement that protects the organization from legal vulnerability.

4. Questions should be asked in the exact order in which they are written. No question should be skipped, unless there is a SKIP instruction (Q19, Q24).

5. Interviewers must learn to read the questions EXACTLY as they are written; they are not to improvise or paraphrase. ONLY THE EXACT WORDS SHOULD BE READ. There is one exception to this. When they make their door-step introductions, they can explain themselves in their own words, merely paraphrasing the introduction listed on page v. But aside from this and explaining what the survey is about or answering questions about the survey,

only the exact words should be read. This is essential because trainees often start out paraphrasing questions. They read the question quickly, therefore, they re-phrase it. When this occurs, stop them and point out that they are not reading the words correctly.

a. The A-B questions must be followed correctly (Q5, Q10, Q13). Trainees often have difficulty with these questions. They forget to ask all the items in Part A before they ask a Part B question. They forget to ask Part B when there is a "Yes" answer to an item in Part A. They sometimes skip over an item because they are rushing too quickly, and so forth. You will find that the trainees will have difficulty for a couple of days with these questions because the way they are asked is not "normal English." Insist, however, that they follow the instructions exactly. All the items in Part A must be asked before Part B is asked. If they answered "Yes" to any item in Part A, then Part B is asked only for that item. If they answered "No" in Part A to an item, then Part B is skipped for that item.

6. Interviewers must learn to handle the respondent handcards correctly. The cards are introduced in Q5 (or before Q6 if there are no "Yes" responses to Part A of Q5). The interviewer hands the deck of cards to the respondent and requests that the respondent not turn the cards until told to do so. At the beginning of the appropriate question, the interviewer will ask the respondent to turn to that number (the cards are numbered according to the question numbers). The interviewer should check that the respondent has turned to the correct card. It is important that the cards be used at every interview, again, for consistency purposes.

7. Interviewers must learn to write down probes. For Q3, Q4, Q25 and Q25A they are encouraged to probe the respondents. The exact words used to probe and the respondent's answers must be written. If there is any clarification required for any question, they should again indicate in the margin what was asked and what they said. You should insist on this because the coders will have to have as much information as possible to make a determination. This is particularly true for the open-ended questions (Q3, Q4, Q25, Q25A).

8. Interviewers must learn to complete the Observation Sheet on page 18 after the completion of the interview. They should also record the time that the interview was completed on page 18.

9. Finally, interviewers must learn to edit their questionnaires immediately after the completion of the interview. If this is emphasized during the training session, the practice will become automatic.

4.3.3. Good Interviewing Skills

Good interviewing skills are partly a matter of knowing the questionnaire procedures, but they are also a matter of "style". The way in which the study is introduced and the manner in which the questions are asked will affect the cooperativeness of the respondent. As the interviewers gain self-confidence, they will find that they obtain higher acceptance rates, that they enjoy their interviews more, and that the quality of their information is better. Making sure that the interviewers are thoroughly familiar with the procedures will help to instill confidence at the beginning; they will know what to do.

There are several additional issues. First, there is the pace of the interview. It should be smooth - neither too fast nor too slow. Monitor the trainees during the session and help them develop a smooth pace. Second, there is eye contact and general openness. Some trainees "hide" behind their questionnaires. They don't look the respondent in the face and they don't ask the questions to the respondent, but rather read them to themselves. Point out this behavior to them so they can correct it. Third, there is sensitivity and openness. Different people have different ways of being sensitive and expressing openness, so it's difficult to lay down any rules. However, if a trainee never smiles, nor expresses warmth in his or her voice, this is liable to make a respondent feel uncomfortable. Intervene immediately so that these characteristics are minimized in interviewing.

4.3.4 Training Techniques: Close Supervision in Small Groups

These three goals are pursued through several training techniques. The framework for training is to have all trainees work in small groups, with close staff supervision. In this way, trainees will have a lot of practice in interviewing during the training session, and will be able to receive immediate feedback when mistakes occur. This technique requires you to have several staff members as assistants. The more qualified staff there are, the smaller the groups can be and the closer supervision trainees will be able to receive.

There are two aspects to close supervison. First, there is supervision during the training session. However, because this requires paying attention to several interviewers at once, it is not possible to catch all mistakes. For this reason, the second kind of supervision occurs after the sessions, when the practice interviews are reviewed. In fact, examining the practice questionnaires can be more useful than person-to-person monitoring. Therefore, commit yourself to careful review of the practice interviews.

At the end of day 2, collect the afternoon's interviews and go over them. The next morning the trainees will turn in their practice interviews from home. Examine these during the evening of day 3, as well as the interviews completed in the afternoon. Similarly, on day 4 the trainees will turn in their practice interviews completed with a stranger. Again, go over these on the night of day 4, as well as looking at the afternoon's interviews. Return the corrected questionnaires to the interviewers with comments. This is also a good time for open discussion and questions from the interviewers. This will be the only time to correct interviewers before the training sessions data collection begins. Therefore, it is essential to carefully supervise trainees during this period.

4.3.5 Training Techniques: The Building of Small Group Solidarity

One important aspect of training in groups is the emphasis placed on small group solidarity. A "team" for studying the city is being created and all the trainees should feel part of it. Trainees will have a lot of anxiety about interviewing - being afraid, feeling incompetent, feeling unsure of themselves. However, working in small groups will help generate close contacts, friendships, and a strong group spirit which can minimize anxiety. If people feel part of a group, they will work harder and more carefully, and they will be more attentive to problems. During the first test of this workbook in Allentown, PA., the group solidarity was infectious and the quality of the interviewing was very high. Even the poorer interviewers were pulled along by the group, and in the end became quite good interviewers. Therefore, this aspect of the training session should be given much attention.

4.3.6 Training techniques: Discussing Openly the Anxieties and Expectations of the Trainees

Another important aspect of the training program is to bring the anxieties, hopes and expectations of the trainees out into the open. It is important to do this because anxieties affect interviewer performance. By discussing them openly, the anxieties can be dissipated and participants will find themselves more comfortable in the actual interviewing situation. On the other hand, if you don't deal with these feelings, they are liable to surface during the interviews.

What are these anxieties and expectations? There are many common ones. First, there are fears about knocking on doors and talking to strangers. Most people have these fears, and there is a lot of anxiety about this. On Day 4 of the practice session, you can address the issue by role-playing door-step introductions. Second, there are fears about talking to people who are different from oneself - people from different races, from different social classes, even from the opposite sex. If an interviewer has this type of anxiety, a respondent may refuse to be interviewed or else the quality of the information is liable to be poor. Third, there are fears about being rejected - that is, a respondent refuses to be interviewed, or the initial contact person slams the door in the face of the interviewer. A fear of being rejected is liable to translate itself into a "self-fulfilling prophecy"; if one expects to be rejected, then one acts in such a way that one does become rejected. Fourth, there are fears about asking certain kinds of questions. The most obvious is the question on the respondent's household income (Q26), but there are also fears about asking one's age, employment status, racial background or even occupation. Fifth, and finally, there are fears about just being a poor interviewer. Unless this is resolved, this fear is also liable to be "self-fulfilling".

How can you handle these fears? Some trainees will be open and will confront you immediately at the first session. For example, someone may ask "Do we have to work at night?" (i.e. "I'm afraid to go into certain areas of the city"), or others will balk at asking income questions. For the majority, however, many of the fears will remain unstated. Trainees will act politely at first, and will not confront you with their fears; they may not admit them to themselves. It is important, therefore, to get at these fears by having at least one session where they are discussed.

The tentative training schedule presented in Section 4.3.7 has a session devoted to discussing these fears (Day 4). Obviously, if they come up beforehand, you should discuss them. There are three reasons, however, for choosing Day 4 for the discussion. First, it will take that long for the fears to surface. Trainees will be excited about the program for the first couple of days and will be more worried about learning the correct questionnaire procedures. Only when they feel comfortable with the questionnaire will they admit their feelings. Second, there should be a substantial amount of group solidarity by this time so that trainees will feel comfortable enough to talk about their feelings. If you try to introduce the subject before this time, you may find that trainees are still too inhibited. Third, and probably most important, the intensity of the training experience will generate a lot of frustration and resentment on the part of the trainees. Be prepared for this and don't worry about it too much. Trainees will resent the strong disciplining of their behavior in going through the interviewing practice, and they may feel "pushed around." Consequently, you are liable to find that by Day 3 and certainly by Day 4, there is a groundswell of feeling pent up within the group. When you introduce the session on expectations, therefore, the trainees are liable to be very ready to express openly their feelings.

The important thing about this session, however, is that it brings fears out into the open. The trainees will find that when they go out in the field, most of these fears are ill-founded. Most people will accept to be interviewed (consistently over 70%) - people enjoy being interviewed, and most will answer all questions. Further, there are not liable to be any uncomfortable incidents, fewer, perhaps, than would normally occur in everyday life due to the "official" capacity of the interviewers. By discussing their fears, however, they are releasing themselves from certain feelings, and they will find that they are more "free" when they go into the field.

4.3.7 Detailed Discussion of the Training Session

Day 1

The first day will be primarily concerned with orientation. Trainees should have been given the Interviewer Handbook before the first session and told to read it. Introduce the project by explaining its purpose and scope, and its value to the city. Possibly an official of EPA will be present to help put the project into a larger context. Explain the four parts of the EPA Quiet Communities Program (QCP) — social survey, physical noise monitoring, strategy analysis, and noise abatement program. Try to make the trainees feel they are part of an important project that will help improve the quality of life in the city.

After this overview, address the issue of research ethics. Trainees should be aware that they are bound by the two important values of objectivity and ethical responsibility. The orientation session will absorb the morning program. Don't rush through the material, but give the participants time to absorb the information.

From the afternoon of the first day through the end of day 5, the main objective is to teach the trainees about the questionnaire and how to administer it. The best means for doing this is practice. Start by going over the structure of the questionnaire, concentrating on the general sections before examining specific questions.

Explain the different sections: the Call Record Sheet, the Selection Roster and the selection of the respondent, the general orientation to the city (Q1-Q5), the evaluation of public services (Q6), the general rating of health (Q7), the general questions about noise (Q8,Q9), the general impact of noise on the individual (Q10,Q16), the examination of specific noise sources (Q17), the support for a noise control program (Q18-Q21), basic demographic information (Q22-Q29), and an Observation Sheet (B1-B6). Present these sections generally so that the trainees will understand the plan of the questionnaire. Then examine each section by itself, looking at all the questions. Though the trainees will not have learned the questionnaire with this quick discussion, they will have started to become familiar with it.

Break the session into work groups after this general introduction. Divide the participants into small groups and assign one staff member per group. The staff member should lead the group in going over the questionnaire, page by page. If there is still time, have a pair volunteer to be an interviewer and respondent, and have a "mock" interview. If there is still time have another "mock" interview. Finally, tell the trainees to re-read the Interviewer Handbook at home. Tell them to read the questions aloud as questions sound differently when spoken.

Day 2

On Day 2, continue working in small groups. Have another pair of trainees conduct an interview, with the others watching. Do this until every individual has had a chance to either interview or be interviewed. In this way, the trainees will become increasingly familiar with the questionnaire, both from experiencing it and from listening to others.

Split the group up into pairs and have each trainee in the pair interview one another. The staff member should watch and monitor each pair in turn. Don't be too critical at this point, because trainees are very unfamiliar with the material. But do make it clear that they are expected to be as accurate as possible. Continue with this process and have each individual turn in the last interview he or she completed. Give the trainees a blank questionnaire and tell them to go home and interview someone they know.

Day 3

At the beginning of Day 3, the staff should return the corrected interviews from the day before. Emphasize that the comments are designed to help participants learn the questionnaire procedures completely and that they are not being judged on whether they "passed" or not.

Collect the interviews completed from home. Answer any questions and encourage a general discussion about how they felt in administering the questionnaire outside of class. After this discussion, break up into small groups again - different individuals from the day before, and continue to practice giving "mock" interviews. The trainees should utilize the Call Record Sheet and the Informed Consent Statement so that they become familiar with using it. This time the staff should be stricter in monitoring interviews, and should intervene whenever mistakes occur. By now, the trainees should be familiar enough with the questionnaire that they can go through it quickly. Monitoring them carefully, therefore, will ensure that they learn the correct procedures and don't develop any bad habits. Continue with the practice interviews throughout the day, and at the end give them the assignment of interviewing a stranger. Have them turn in their last interviews. They can contact the stranger by either knocking on doors or else going through a friend.

At night, the staff should go over the two interviews turned in by each trainee - the interview from the night before and the last interview of the day. Individual feedback should be given. Staff should pay attention to improvement or lack of improvement from the day before. Trainees who are having special difficulties should be sorted out for special attention on Day 4. Closer supervision can be made on these individuals. Finally, the editor, the two validators, and the four coders should be chosen at this point. On Day 4, these individuals should practice these tasks (see Section 4.7 for editing, Section 4.8 for validating, and Section 4.9 for coding).

Day 4

At the beginning of Day 4, return the corrected questionnaires and collect the interviews from the night before. Ask the trainees how they felt about interviewing a stranger. Try to elicit their feelings, expectations and fears. After this discussion, practice door-step introductions. Encourage them to use their own words in presenting themselves, though they should include all the information. These practices will help bring out underlying feelings, and the staff should be prepared to discuss them. Spend most of the morning on the door-step introductions. Also, give some practice in estimating distance in feet for the Observation Sheet (B3).

In the afternoon, separate the group into the various sections: 1) those who need closer supervision, 2) those who can be left alone, and 3) the editor, validators and coders. For those who will be interviewers, continue with the "mock" interviews, while the office personnel will receive special instructions on their future tasks. Continue practicing all afternoon, and have them turn in their last interview of the day. At home, have them write down on paper their feelings, thoughts and expectations about both the training session and the upcoming interviewing. This will help them concretize their fears and hopes, thereby freeing them of many of these feelings when they go to the field.

At night, staff should again go over the "mock" interviews. If there are any individuals who still don't know the interviewing and questionnaire procedures, select them out for special attention on Day 5. It is important not to let anyone out into the field until he or she is ready.

Day 5

At the beginning, turn back their interviews from the day before. Have them discuss what they wrote the night before and deal openly with any fears that might emerge. After this, select out the group which needs special attention and have the group continue interviewing practice. These people are liable to feel frustrated and have feelings of failure. It is essential to explain, however, that they need a little more work to learn the interviewing procedures completely. Previous experience has shown that people who have difficulty in the training session often turn out to be problematic in the field and these trainees are just not going to work out. Therefore, take care in giving assignments to these people, and you should carefully monitor their work after they have been sent into the field. Though the trainees may feel somewhat rejected by having been selected out, they are liable to be more motivated to learn the questionnaire procedures correctly because they know the staff are watching them carefully.

Start giving assignments to those interviewers who know the questionnaire sufficiently. With the group as a whole, go over the nature of the assignment. Explain that they will be responsible for contacting and interviewing all the households in a cluster. Tell them to telephone the office in case any difficulty appears, or to resolve any ambiguity; it is better if they stop and make a telephone call than make an arbitrary decision that might be wrong. Discourage interviewers discussing problems with each other.

It is important to set up periodic meetings with the interviewers. These will be the times to collect questionnaires, give out new clusters, discuss problems of interviewing, give individual feedback, assess feelings and perceptions, and basically renew the strong group solidarity. Therefore, on this final day of the training period set up an appointment for the interviewers to get together again. Two weeks later would be a good time because they will have just about finished their first cluster, and it will be a good time to consolidate their experiences. Make a point to set up regular meetings.

Next, take each interviewer in turn and give him or her a Cluster Kit, which has already been prepared (Section 4.6). The questionnaires from the cluster are logged on both the Field Log Sheet (Form J) and the Interviewer Log Sheet (Form K) – see Section 4.4.1. Go over the exact location of the cluster with the interviewer so that he or she knows exactly how to get there.

After all interviewers have been given Cluster Kits, have one final meeting to discuss any questions, handle any unfinished tasks, and so forth. Then the training session is finished, and the survey implementation begins.

Much of the work over the next 8 to 10 weeks will be to monitor the field operation. You will be giving out assignments to interviewers, logging out Cluster Kits, logging in questionnaires, monitoring field quality, responding to field problems, sorting out the questionnaires for editing and coding, editing questionnaires, validating interviews, and turning over edited questionnaires to coding. You will probably find that work periods tend to go in peaks. Whenever the interviewers meet as a group, finished questionnaires will be returned and new Cluster Kits must be given out. In between these meetings, some questionnaires will come in and some Cluster Kits will be given out, but the load will be smaller. Instead, you will be responding to field problems as well as concentrating on editing, validating, and coding.

4.4 Allocating Household Assignments to Interviewers

Interviews are to be done in clusters, and one interviewer will be responsible for all the households to be interviewed in that cluster. This will reduce travel costs and time, as it is relatively easier for the interviewers to handle a block or set of blocks. This is not part of the sampling procedure, however, and can be amended whenever necessity dictates.

Initially, give out only one cluster to each interviewer. After the field operation is underway, you will find that you can give more to more clusters to interviewers. An interviewer may have a few questionnaires left over from previous clusters for which contact attempts are being made. Rather than wait until the entire cluster is finished, whereupon the interviewer is not doing any work in the interim, it is better to give out more clusters. But do this only as the interviewers gain competence in the task.

To do this, you will have to decide beforehand the order in which to give out clusters. This way, it is possible to send introductory letters approximately one week before interviewers visit the household. The easiest solution would be to start with Cluster 001 and work upward until you reach Cluster 100.. The problem with this solution, however, is that you are giving out the residential clusters first and waiting for the "noisier" noise zones until later. There is a chance that the quality of the interviewing will change as interviewers gain experience. In addition, since the survey will take approximately two months to complete, the noise environment might actually change because of a change in the seasons. Therefore, the best solution in giving out clusters is to make sure that there is no systematic bias. Either take the table of random numbers and select the order in which clusters are to be assigned (choose a page; take the first two numbers in your telephone number as the column and row numbers; then taking three digits at a time, select clusters until all 100 clusters have been chosen; if a number comes up a second or third time, then you will obviously disregard it as the cluster has already been chosen), or else divide up your cluster list into fifths (001 - 020, 021 - 040, 041 - 060, 061 -080, 081 - 100) and systematically balance the distribution from each of the fifths.

Determining which clusters go to which interviewers is a less systematic decision. Some of the issues to be considered are: (1) don't assign interviewers to the same neighborhoods in which they live; (2) try to balance travel times across interviewers (e.g. if an interviewer has a short trip for his or her first cluster, then he or she should make a longer trip for the next cluster, and vice versa); (3) try to balance the distribution of males and females for different areas of the city so as to avoid introducing a systematic bias; (4) try to balance the distribution of clusters by socio-economic variables (e.g. no one interviewer should have only middle-class clusters). At the same time, there will be exceptions to these principles: (A) minority group interviewers will be very valuable for interviewing in minority neighborhoods; don't, however, exclusively assign only these types of neighborhoods to such interviewers; (B) some people will be afraid to go into certain neighborhoods (e.g. ghetto areas, poor areas, minority areas); if an interviewer has such fears, respect them for you are liable to have more difficulties by insisting; (C) interviewers with special language skills should be assigned to neighborhoods in which they can use these skills; also, for individual respondents around the city, these specially qualified interviewers should be used; (D) you may have to adjust interviewers according to special circumstances (e.g. some interviewers can't obtain a car on a certain day). The general rule is that no systematic bias should be introduced by interviewer assignments; just as cluster, households and respondents are selected randomly, so too should interviewers be assigned randomly. Practically, however, you may have to violate this rule occasionally in order to obtain an interview, and since you are dealing with a complex human problem (and not a random mathematical one), tact and flexibility are very important.

It may be necessary to reassign interviewers occasionally. For example, if one particular interviewer has difficulty in obtaining an interview from a particular respondent (for whatever reason), then send another interviewer who may have better luck in obtaining consent. The non-interview checklist on pages ii and iii of the questionnaire should give useful information for making this assessment. You may even need to assign a third interviewer in exceptional cases. However, don't overload interviewers with assignments. Forty interviews should be the maximum number for an individual.

4.4.1 Logging of Questionnaires

Each cluster must be logged on both the Field Log Sheet (Form J) and the Interviewer Log Sheet (Form K). Figures 4.4-1 and 4.4-2 give examples of filling out the forms. By using the forms, it is possible to keep track of questionnaires and interviewers.

The Field Log Sheet (Form J) is organized by cluster. It records the respondent ID number, the date on which the questionnaire was assigned, the Interviewer ID number, the date on which the questionnaire was returned and logged, and the result of the interview — completed (C) or non-interview (N). The Interviewer Log Sheet (Form K) keeps track of the interviewers. The form records the cluster number to which the interviewer has been assigned, the respondent ID number, the date on which the questionnaire was assigned, the date on which the questionnaire was returned, the number of calls that were made on the household, and the result of

FORM J

FIELD LOG SHEET

Page 1 of 2

Cluster # 032

Respondent ID #	Date Assigned	Interviewer ID #	Date Returned	Result: C/N
032-01	6/3	32	6/6	C
032-02	6/3	32	6/15	N
032-03	6/3	32	6/10	C
032-04	6/3	32	6/6	C
032-05	6/3	32	6/15	N
032-06	6/3	32	6/9	C
032-07	6/3	32	6/15	N

Figure 4.4-1. Example Field Log Sheet Filled Out

FORM K

INTERVIEWER LOG SHEET

Page 3 of 6

Interviewer DAVID LOPEZ ID# 32

Cluster #	Respondent ID #	Date Assigned	Date Returned	Number of Calls	Result: C/N
032	032-01	6/3	6/6	1	C
032	032-02	6/3	6/15	5	N
032	032-03	6/3	6/10	4	C
032	032-04	6/3	6/6	2	C
032	032-05	6/3	6/15	4	N
032	032-06	6/3	6/9	3	C
032	032-07	6/3	6/15	5	N

Figure 4.4-2. Example Interviewer Log Sheet Filled Out

the interview attempt - completed (C) or non-interview(N). It is recommended that you use a separate Interviewer Log Sheet each time an interviewer is given a new cluster. This will make it possible to keep track of any interviewer's work on a particular cluster.

4.5 Managing the Field Operation

4.5.1 Monitoring Assignments

One of the major tasks is to monitor the quality of the interviewing. The office personnel (editor, validators, coders) will catch various mistakes that have been made and feedback must be given quickly to interviewers to prevent the same mistakes in the future. At the same time, monitor the overall work of the interviewers. As a general rule, aim for at least a 70% completion rate (that is, 70% of the households contacted should give completed interviews). Ideally, if it is possible to have a higher acceptance rate, this will improve the overall accuracy of the study. Therefore, 70% should be thought of as a minimum acceptance rate.

Periodically check the overall efficiency of the survey. The information on the Field Log Sheet (Form J) makes it possible to calculate an on-going acceptance rate (the number of completed interviews divided by the total number of households contacted so far), and this percentage can be watched over the succeeding weeks. If the rate starts to drop below 70% , diagnose why this is and take corrective action (e.g. interviewers may be getting sloppy or rushing too quickly; a holiday may be approaching; etc.). Discussion of the problem with the interviewers is a good way to analyze the problem.

Similarly, monitor the acceptance rate of individual interviewers from the information on the Interviewer Log Sheets (Form K). Some interviewers get consistently higher acceptance rates than others. Concentrate the effort on improving the acceptance rate of those interviewers who get low acceptance rates, lower than 70%.

Also, monitor the total output of individual interviewers. Some interviewers consistently contact many households, and others contact very few. There is a "work rate" vs "success rate" trade-off. Think of four types. Type I interviewers contact many households and obtain high acceptance rates. Assuming that the quality of the information is good, such people are ideal interviewers. Type II interviewers contact many households but obtain low acceptance rates. In this case, the work rate of these interviewers is good, but for some reason they are getting too many refusals or not making contact with households. You will have to diagnose what the problem is and try to help them. Possibly you will have to slow these interviewers down in order to bring their work rate into balance with others or you may have to talk to them to find out why they are getting too few completions. But it is important that the problem be corrected quickly as a bias is liable to be introduced into the results (i.e. certain clusters have been undersampled). Type III interviewers contact fewer households but obtain high acceptance rates. These people are generally successful in their attempts, but try to increase their work rate. Examine the time period it takes for them to finish an interview; perhaps they are taking too much time. Look at the Call Record Sheets for their questionnaires to see their work pattern; perhaps they are working too few days a week. Type IV interviewers contact few households and obtain low acceptance rates. In this case, something is definitely wrong and it needs to be investigated. If a solution can't be found, perhaps it would be best to release these interviewers from the study.

4.5.2 Responding to Field Problems

Aside from monitoring the overall work rate and acceptance rate, it will be necessary to respond to various field problems that emerge. Basically, there are three sources of problems: materials, interviewers, and respondents.

Problems with Materials

Problems with materials can occur because an interviewer does not have enough questionnaires or related materials, a page in the questionnaire is missing, or some of the materials have been spoiled. The obvious solution to these problems is to get the materials to the interviewer quickly. Be sure that you change your logs to incorporate these facts (e.g. for a spoiled or incomplete questionnaire, give the same identifying numbers to the questionnaire and record that a substitution was made).

Problems with Interviewers

Problems with interviewers can come up for a number of reasons. Most inquiries from interviewers come up because the interviewer did not understand the rules and procedures of interviewing. For example, the interviewer may call up because he or she cannot locate the correct respondent. The answer must be, "You must interview only that respondent. Do not interview anyone else at that address". Or one member of the household may insist on speaking for another (e.g. a husband who insists on speaking for his wife, where his wife is the respondent). Remind the interviewer that only the chosen respondent can be interviewed. If a household member refuses to allow the respondent to be interviewed (e.g. a husband refusing to allow his wife to be interviewed, a parent refusing to allow a son or daughter to be interviewed), explain to the interviewer "You must interview the respondent and no one else at that house. If the person won't allow the respondent to be interviewed, then you must leave and the interview will be a non-interview". The response in all cases must refer to the rules and procedures of interviewing.

Other kinds of problems have to do with interviewers finding it difficult to go to certain parts of the city. For example, sometimes interviewers object to going to certain areas of the city in the evening (areas with minority groups, areas which the interviewers think are "high crime" areas, etc.). Sending along an escort may be the best solution. Or an interviewer may suddenly find that his or her car has broken down, and it is impossible to get to a certain place that day. Try to find transportation or else you may re-assign the household to another interviewer. It is quite impossible to list each and every contingency which could come up, so think through each problem as it arises.

Sometimes only sensible advice can solve a problem for interviewers. An interviewer cannot make contact at a household because the residents are away on holiday. Tell the interviewer to ask the neighbors when they will be returning. A particular respondent is sick in the hospital. Tell the interviewer to find out when the respondent will get out. A particular respondent is incapable or is too sick to be interviewed. If there is no chance of recovery in the immediate future, declare the household as a non-interview. The study has been scheduled to finish in 10 days, and a respondent will be available in 2 weeks time; 4 days won't be disastrous in terms of finishing the study. On the other hand, a respondent is abroad and won't be back for 6 weeks, when the study is finishing in 2 weeks. Then you will have to declare the household as a non-interview.

The guidelines are to refer to the basic values of the study-objectivity and ethical responsibility. First, never make a decision which would harm the objectivity of the sample or affect the objectivity of the interviewing process. Second, never make a decision which would be unethical in terms of the professional role of an interviewer.

It may be necessary for you to go out to the field to inspect a situation. For example, if an interviewer is having difficulty getting inside a security building, you may need to telephone or visit the manager of the building in order to get permission to list and interview. A certain amount of flexibility on your part is absolutely essential.

In summary, problems with interviewers are human interaction problems in most cases, and you will have to apply logic, sensitivity, tact, awareness, and openness in solving these problems. Remember, all interaction with interviewers doesn't end with the training session. All information that you gather about interviewers - their errors, weaknesses, strengths - must be communicated back to them. This is a continual process and will help to improve the quality of the interviewing.

Problems with Respondents

Similar problems can occur with respondents. Many respondents are suspicious of being interviewed. They may have fears about being taken advantage of, having something sold to them, having their household looked over for possible burglary, or even robbed in their own home. Because these fears exist, you must emphasize to the interviewers the importance of maintaining an ethical, professional role. If the interviewers are sensitive to respondents, if they show the proper credentials, if they take pains to answer all respondent questions openly and honestly, then in the vast majority of cases no difficulties will occur. The introductory letters sent to the households before the interviewers arrive will also help diminish any suspicion, though householders are still liable to be somewhat cautious.

The Informed Consent Statement will also help legitimize the study. The Informed Consent Statement explains the general purpose of the survey and asks for the participation of the respondent. The respondent is agreeing to participate voluntarily. Two copies of the statement are signed both by the respondent and the interviewer. One copy is given to the respondent and the other is brought back to the office, where you should keep it on file.

Some respondents may require better identification than what the interviewers show. You may have to write a letter to ask for participation in the study.

The respondent may telephone to learn the purpose of the study. Sensitivity to residents' fears on your part will help to keep high interview completion rates and will also help in creating a good image for the study. Respondents talk to other people, after all, and when a cluster has been selected for interviewing, it is possible that neighbors will eventually share their stories. Newspapers may find out about the study as well and may want to do a story. Consequently, it is important to keep an ethical and open public image.

Sometimes one member of the household insists on being interviewed instead of the respondent. In this case, insist that only the respondent can be interviewed, and if the member of the household refuses to allow the interviewer to talk to the respondent, then the household is declared a non-interview. Also, some of the interviewers may get themselves into difficult situations with respondents. Sometimes husbands or wives become jealous of interviewers of the opposite sex talking to their mate. Instruct the interviewers to always sit in a place which, while private, will not incur gossip or possible ill feelings from other members of the household.

Difficulties also occur in making contact with respondents. Security buildings are a case in point. It may be necessary for you to talk to the manager of such a building to gain his or her cooperation in the study. Or interviewers may have difficulty in locating anyone from a particular household. The use of the Reverse Telephone Directory may be useful in looking up a number; don't do this, however, until at least three call attempts have been made on the house. Interviewers may get lazy and may try to do their work by telephone, a behavior which could lower the acceptance rate.

4.6 Sorting Out Questionnaires for Editing and Coding

After questionnaires are returned from the field, a process of sorting occurs, as the questionnaire moves through the various stages of editing and coding. First, the questionnaires must be logged. Then the completed questionnaires are sent to editing while the non-interviews are put aside in a separate pile.

Probably the best way to keep track of the office process is to use large boxes. On the front of the questionnaire there is an editing checklist. As a questionnaire passes from one step to another in the office procedure, the responsible individual dates and initials the questionnaire. If these questionnaires are stored in boxes, the sorting procedure can be kept track of easily as the questionnaires at any one step are always physically isolated from questionnaires at another step. The questionnaires are moved from one box to another as they pass through the office procedure until the end, whereupon they are put back into envelopes according to cluster.

This procedure was used in Allentown and it proved highly successful. Figure 4.6-1 illustrates the process of editing and coding. Eleven boxes are used.

4.7 Questionnaires Edited for Completeness and Consistency

Editing is the process of checking for correct respondent selection and for completeness and consistency of information. One person can edit all the questionnaires. The editor should check for certain sources of error and should attach paper clips for all questions. The editor should write with a colored pencil different from the red color used by the coders.

1. The editor should check that the roster has been filled out correctly and that the correct respondent has been selected for interviewing. If the roster has been incorrectly filled out and a wrong respondent has been selected, the editor should write in colored pencil "incorrect respondent" across the

front, and the questionnaire is invalid. The interviewer must then return to interview the correct respondent.

2. The editor should check for a mistake that might indicate that the wrong respondent has been selected. If on the Roster one person is indicated as the respondent, but there is evidence that another person was interviewed, then this might suggest that the wrong person was interviewed. This evidence might be: a) the person who agrees to be telephoned for validation on page 17 is not the same as the listed respondent, b) the sex of the respondent listed on the roster differs from that checked in B1, or c) the Informed Consent Statement was signed by a person other than the respondent.

3. The editor should make certain consistency checks which while not invalidating the questionnaire might invalidate certain questions.
   a. that the age of the respondent reported in Q22 on page 13 is the same as that reported on the roster. If there is a slight discrepancy, the answer to Q22 will be taken as "real" and the editor should mark on the roster what the age is (without erasing the original reported response).
   b. that the total number of persons in the household (Q29) is equal to or greater than the number of adults in the household.

Any mistakes on these should be marked with a paper clip and noted in colored pencil. These will act as a "flag" for the coders.

BOX SYSTEM FOR SORTING THROUGH OFFICE PROCEDURES

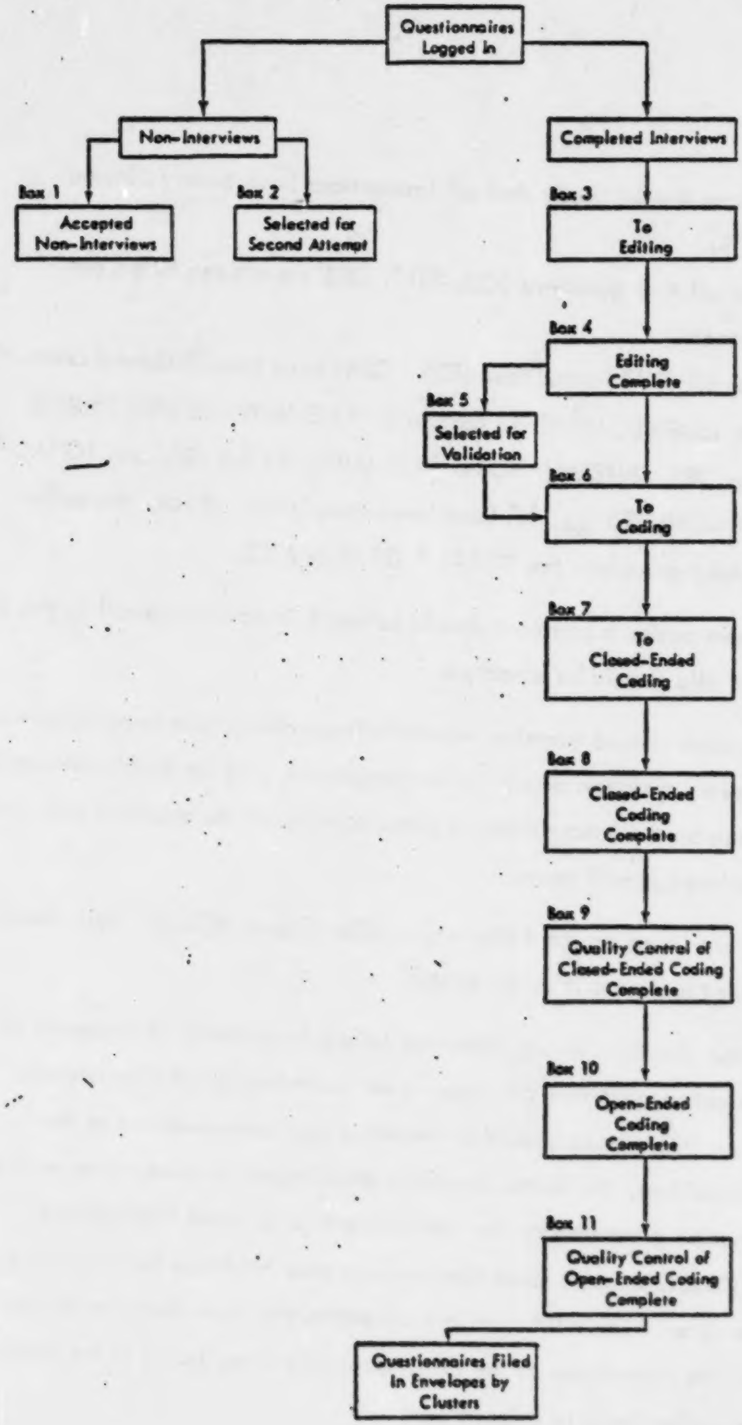

Questionnaires Logged In
Non-Interviews
Completed Interviews
Box 1
Accepted Non-Interviews
Box 2
Selected for Second Attempt
Box 3
To Editing
Box 4
Editing Complete
Box 5
Selected for Validation
Box 6
To Coding
Box 7
To Closed-Ended Coding
Box 8
Closed-Ended Coding Complete
Box 9
Quality Control of Closed-Ended Coding Complete
Box 10
Open-Ended Coding Complete
Box 11
Quality Control of Open-Ended Coding Complete
Questionnaires Filed In Envelopes by Clusters

Figure 4.6-1. Example Box System for Sorting Through Office Procedures

4. The editor should check that all instructions have been followed correctly.
   a. that all A-B questions (Q5, Q10, Q13) have been filled out correctly;
   b. that all SKIP instructions (Q19, Q24) have been followed correctly;
   c. the TIME BEGINNING (pg. vii), TIME INTERVIEWED ENDED (pg. 18), INTERRUPTION: # OF MINUTES (pg. 18), and TOTAL # OF MINUTES (pg. 18) have been completed. If not, the editor should calculate the TOTAL # OF MINUTES.

If a mistake has been made, a comment should be made in colored pencil in the left margin and a paper clip should be attached.

5. The editor should examine whether all questions have been completed. For every question which is not completed, and in which nothing is written by the interviewer, a paper clip should be attached and a note in colored pencil made.

These five points are listed on the Editor's Checklist (Figure 4.7-1). You should photocopy this sheet and give it to the editor.

The editor should also pay attention to any irregularity in responses or patterns which might suggest that the interviewer recorded answers incorrectly. Any mistakes by an interviewer should be recorded and communicated to the interviewer. In addition, the editor should be encouraged to make notes on the quality of information presented by the interviewers (e.g. some interviewers' handwriting is difficult to read; some interviewers give too little information on the open-ended questions). The editing role is an extremely important one for not only does it check on the correctness of the respondent selection, but it is the source of extremely valuable feedback to interviewers.

Be Sure to Check for the Following:

1. That the Selection Roster has been correctly filled out and that the correct respondent has been selected. IF the correct respondent has not been selected, write "INCORRECT RESPONDENT" across the front of the questionnaire and contact the Field Director IMMEDIATELY.

2. That the person chosen as the selected respondent is actually the person who was interviewed. Check that:

   a. the person who agrees to be telephoned for verification on p.17 is the same as the selected respondent;

   b. the sex of the respondent listed on the Selection Roster is the same as that checked in B1; and

   c. the Informed Consent Statement was signed by the selected respondent.

   IF there is any problem, contact the Field Director IMMEDIATELY.

3. That there is consistency between several items:

   a. that the age of the respondent as reported in Q22 (p.13) is more-or-less the same as that reported on the Selection Roster. The age may differ slightly because the person who reported on the Selection Roster may not be the same person as the selected respondent. But if the age on Q22 differs from that reported on the Roster, check that this has not altered the order of listing on the Selection Roster.

   b. that the total number of persons in the household (Q29) is equal to or greater than the number of adults living in the household, as reported on the Selection Roster.

   IF there is any problem, contact the Field Director IMMEDIATELY.

4. That all instructions have been followed correctly:

   a. All A-B questions (Q5, Q10, Q13) have been filled out correctly;

   b. All SKIP instructions (Q19, Q24) have been followed correctly; and

   c. The TOTAL # OF MINUTES (p.18) has been correctly calculated.

   Any mistakes on these questions should be marked in colored pencil to the left of the question. Mark the page with a paper clip.

5. That all questions have been completed. For every question which is not complete, make a note to the left of the question in colored pencil and mark the page with a paper clip.

Figure 4.7-1. Editor Checklist

After the editing has been completed, the questionnaires are dated and initialed by the editor and placed in the "Editing Complete" box.

4.8 Validation of Selected Questionnaires

Validation is the process of telephoning the respondent and checking several aspects of the interview. In order to ensure a high quality of interviewing, validation of some questionnaires is done in order to check whether interviewers have followed the correct procedures. The interviewers know that a certain percentage of their interviews will be validated, but they don't know which ones.

Select some of the questionnaires in the "Editing Complete" box for validation. Put them in the "Selected for Validation" box while the remainder will be placed in the "To Coding" box. The criteria for selecting questionnaires depend partly on resources. Ideally, if staff are available, all questionnaires should be validated. Practically, however, this is usually impossible; therefore, the following set of rules can be followed:

1. For each interviewer, all questionnaires from the first assigned cluster should be validated.
2. Ten percent of the remaining questionnaires for each interviewer should be validated (select these randomly).
3. Any questionnaire for which the editor was doubtful that the correct respondent was interviewed should be validated.
4. Any questionnaire for which there are any doubts about the accuracy of the interview should be validated.

Validation is an extremely important step since it helps ensure quality interviewing. Inform the validators that they are to look for discrepancies between reported answers on the questionnaire and what the respondent says over the telephone. They should record discrepancies so they can be communicated to the interviewers.

Form L (in Appendix H) is used for the validation interview. The form is divided into two parts - a telephone call record sheet on which are recorded the attempts to locate the respondent, and eight factual questions which are used for validating against the interviewer's recorded responses. The validator will, therefore, have to prepare these forms before telephoning, so that any differences can be discussed quickly.

The rule for telephoning is to make four attempts to contact the respondent. If after four attempts the respondent still cannot be located, the questionnaire is removed from the validation process (it would be too expensive and would take too long to persist). However, if this happens, and if someone else is at home, have the validator verify that the respondent does live at that address.

The next eight questions are all factual. The first one verifies whether the interview, in fact, took place. Questions 2 through 6 assess answers to factual questions which can be compared to the interviewer's recorded responses. Question 7 assesses whether the interviewer asked the income question and whether he or she used response cards. Finally, Question 8 is another factual question. In addition, any comments the respondent makes about the interview or about the interviewer should be recorded VERBATIM. This is often the most useful information about interviewers and can help you give immediate feedback to them on their interviewing style.

If there are a number of differences between the recorded responses on the original questionnaire and what the respondent told on the telephone, you must assess this. If there are one or two differences, consider this as "random error." People change their answers to questions, even factual ones, or the interviewer may not have heard properly. Accept the original answer as the correct one (unless the respondent is insistent over the telephone). But if there are more than a couple of differences, find out immediately why. A good rule here is to validate all the completed questionnaires for the particular interviewer to see if there is a systematic bias being introduced (e.g. some interviewers systematically avoid asking income questions). Also, discuss these differences with the interviewer so as to rectify the situation as soon as possible.

If you find that an interview was never completed, even though the interviewer reported it completed, you must, naturally, remove the interviewer from the study and validate all of his or her previous interviews. It is essential to catch any "cheating" immediately.

After validation, the validator dates and initials the questionnaire and places it in the box labeled "To Coding".

4.9 Coding of Questionnaires

4.9.1 Edited Questionnaires Logged by Coding

After a questionnaire has been completely edited and after it has been validated (if it was selected for this), then it is transferred to the "To Editing" box, at which point it is logged in coding. The Coding Log Sheet (Form M), like the Field Log Sheet (Form J), is organized by clusters. This form makes it possible to keep track of which questionnaires have passed to coding, and it can be compared with the Field Log Sheet, which tells which questionnaires to expect. Figure 4.9-1 gives an example of a Coding Log Sheet.

The Coding Handbook (Appendix I) gives detailed coding instructions, and is to be used by all coders. There are some additional points which should be discussed.

FORM M

CODING LOG SHEET

Page 1 of 1

Cluster # 048

Respondent ID #	Interviewer ID #	Date Logged by Coding
048-01	26	7/1
048-09	26	7/1
048-06	26	7/3
048-05	26	7/3
048-02	26	7/3
048-03	26	7/4
048-04	26	7/4
048-07	26	7/4
048-08	26	7/6

Figure 4.9-1. Example Coding Log Sheet Filled Out

4.9.2 Training Session for Coders

The four coders should come out of the same pool as the interviewers and should participate in the same training session (Section 4.3). After the third day, however, the coders should be selected and given special training for two days. The training consists of practice -coding questionnaires; the practice interviews that are being done in the class can be used for the coding.

Give the coders copies of the Coding Handbook and tell them to read it quickly over night. By the next morning, they will have only a general idea of the details, but their experience with the interviewing training should allow them to learn very quickly. Sit down and concentrate on the close-ended questions, explaining how coding involves transferring answers into numeric codes. Continue until coders are familiar with the process; don't introduce the four open-ended questions.

As they complete the coding of practice interviews, go over each questionnaire with them and explain all mistakes. Pay particular attention to sloppy handwriting which is illegible, mis-codes, the coding of "No Answers", and the skipping over of blank spaces. Explain that a keypuncher will have to read the numbers inside the boxes so that the numbers written there must be legible.

After a day of practicing, take two of the four coders and start them on the open-ended coding, while the other two coders continue with the closed-ended questions. Because open-ended coding involves looking up a code in the Coding Handbook, the two coders should concentrate their efforts only on the open-ended coding. The two other coders should code exclusively closed-ended questions. This is important because coders must get into a kind of 'mental set' to code; if they change tasks, this 'set' is broken and many mistakes will occur.

4.9.3 Open-ended Coding

The greatest difficulty in open-ended coding is trying to fit answers into the defined categories. This will require some interpretation in that the coders will have to understand the meaning of a response in order to fit it into the closest category. But it is important that you do not convey to the coders that they can be loose in fitting responses into categories. They should try to judge what the meaning of a response is, and to which category it belongs; they should not try to read any extra meaning into a response. This is liable to be particularly relevant for the occupational questions (Q25, Q25A). There are 14 general occupational categories which cover major occupational sectors of the economy. Listing 14 categories simplifies the analysis of occupations, but it does involve some over-simplification; if each and every occupation were to be coded, the list would extend to almost a thousand individual occupations. The coders will have to learn what the general categories are, and what types of occupations fall within them; then when a particular occupation is encountered in Q25 and Q25A, they should be able to judge fairly accurately to which group the occupation belongs. Only if they cannot fit an occupation into a general group should the miscellaneous category be used (code '15' in the occupational classification). If you really get stuck, use the list of occupations that the U.S. Census Bureau uses from which many of the general categories were taken.

With Q3 and Q4, there are both general categories and specific codes within these categories. But the basic principles are the same. The coders must learn the meaning of each of the general categories, and then try to fit the answer into the category which fits closest. Only if the categories cannot fit should the various miscellaneous categories be used.

In all cases, the coders - whether closed-ended or open-ended, should always refer to the Coding Handbook when they have a problem. Also, when you make quality control tests on them, continually refer to the handbook. Do this in order to establish the pattern of looking up the correct answer in the handbook if a problem is encountered. DO NOT encourage the habit of guessing. If coders don't know the answer to a problem, and if they can't find it in the handbook, then they should ask questions rather than make arbitrary interpretations.

4.9.4 Quality Control of Coding

The best way to do quality control of coding during the field operation is to check each and every questionnaire. While this seems like an enormous work load, it is the only way to guarantee good quality in coding. You will find that literally dozens of different types of mistakes occur. Even coders who are extremely thorough and competent will make occasional mistakes. It is important to realize that small mistakes can hurt the reliability of your results. Remember, the computer program is "dumb" in the sense that it can only read numbers. If a number is incorrectly recorded, then the machine will accept this as readily as if the number was correct. A quality control computer program has been designed to check for gross errors, but small ones cannot be checked. Errors, even small ones, can seriously distort the information, so it is important to minimize their impact if not eliminate them altogether. Therefore, accept the responsibility of checking each and every questionnaire in order to reduce mistakes.

Quality control checking follows the sequence of coding. After a questionnaire has been logged by coding, it is placed in the "To Closed-Ended Coding" box (box 7). From there, the coders responsible for closed-ended coding take it and code the closed-ended questions. They then place the questionnaire in the "Closed-Ended Coding Complete" box (box 8). Take the questionnaire out of this box and check it. Change any mistakes that occur by erasing the wrong answer and writing the correct one in the right-hand margin of the questionnaire, in red pencil. Keep track of mistakes in order to give feedback to the particular coders. After the quality control of the closed-ended questions, place the checked questionnaire in the "Quality Control of Closed-Ended Coding Complete" box (box 9). From there, the open-ended coders take it and code the open-ended questions, placing it in the "Open-Ended Coding Complete" box (box 10). At this point, you will then check the open-ended questions, afterward placing it in box 11 - "Quality Control of Open-Ended Coding Complete". Later, place the questionnaire in its cluster envelope for final storing. At each step in this process, the box on the front of the questionnaire is initialed and dated at the appropriate spot.

4.9.5 Management of Coding

You will find that coding tends to work in cycles. For the first two weeks of the field operation, there will be few questionnaires to code. After the first meeting, interviewers will return with completed questionnaires and the coders will have much work to do immediately. After a week or so, however, the work load will drop off until another batch of questionnaires is returned. If there are regularly scheduled meetings with the interviewers, the questionnaire return cycle will probably occur throughout the study. This may pose a problem, however, depending on the financial arrangements with the coders, because there will be days when the coders have little work to do. If possible, schedule coders to work only three days a week, and the work may be spread out more evenly.

4.9.6 Final Check

After all the questionnaires have been coded and checked, one last quality control check on all the questionnaires should be made. Though this will be an exhausting three or four day operation, it is the only way to catch mistakes and, thereby, guarantee the overall quality of the results.

4.10 Keypunching of Data for Analysis

Finally, the information from the questionnaires is keypunched on to common 80-column computer cards. The questionnaire has been designed so that a keypuncher can punch directly from the form, following the right-hand margin. Contact a local keypunching firm and explain the nature of the task. Many keypunch organizations are unfamiliar with this type of work, so it is important to completely explain the format.

1. There are four computer cards per questionnaire.
2. All cards start with the respondent ID number. Many keypunch machines are capable of automatically punching in the respondent ID number on each card (columns 1 through 5). Be sure to check this possibility as it will help reduce punching errors.
3. The START and END of each card is indicated in the right-hand margin.
4. The card number is recorded at the top right-hand corner - the circled number.
5. The number directly above each block indicates the column number on the card in which that number should be verified.

Most keypunch organizations can complete this task in a couple of days. If you arrange the task a few weeks beforehand, it will be possible to get the punched cards within a week after submitting them.

Be sure that the punched cards are verified. Verification is basically the re-punching of the cards in order to check for mistakes. This is essential to reduce keypunching errors. It is important to request this verification since many keypunch organizations will not do it unless asked.

Be sure to have the keypunch organization produce two duplicate copies of the decks to insure against loss or damage to the original deck. This is a very easy process which takes 5-10 minutes.

4.11 Preparation of Physical Monitoring Data for Analysis

If the physical monitoring survey has been taken, you will also prepare the acoustical data for analysis. It may be that this physical data will not become available for a considerable time after the interviewing is complete. It might, therefore, be decided to analyze the social survey data first. For this reason, the physical data is being prepared on a separate data deck from the social survey data, and will be added to the analysis computer program by the systems programmer.

The physical data will give noise levels in terms of day-night sound level (L_{dn}) for each cluster. That is, each cluster that has been selected will have a unique noise level associated with it, and it is assumed that all residents in cluster 001 are exposed to roughly this level. For example, cluster 001 may have an L_{dn} of 64 dB while cluster 002 may have an L_{dn} of 73 dB. It is assumed that all residents in cluster 001 are exposed to 64 dB while all residents in cluster 002 are exposed to 73 dB. While this may not be strictly true, greater accuracy would require placing a microphone in front of each household separately; the value obtained is considered to be a valid approximation.

The data for assigning noise levels to each cluster come from three sources. First, for the airport and railroad zones, noise levels are calculated using noise prediction methodologies (see Section 4.2 for airport zones and Section 4.4 for railroad zones in the Acoustical Survey Manual). That is, for all clusters assigned to airport or railroad zones, you will use simple arithmetic procedures to calculate a single L_{dn} value for each of the noise zones (two airport, one railroad). Then, all clusters within airport or railroad zones will be assigned the single value for that zone.

Second, for all other clusters, 20-minute measurements have been carried out and a special optional computer program available from EPA will have reduced the data into an estimate of L_{dn} for each cluster. Figure 4.11-1 gives an example of the type of printout that will be produced. It is important to realize, however, that the physical monitoring site location numbers will not normally correspond to the cluster numbers. The physical monitoring sampling framework measures at all cluster sites,

```
    NOISE ZONE: R                         7-DAY SITE STATISTICS
       SITE         LDN    LEQ    L1     L10    L50    L90    L99    STD. DEV.   L10-LEQ   L1-LEQ

  Cl. 001  1        43.2   40.6   43.9   42.4   40.0   38.2   37.8     1.5         1.9      3.3
* Cl. 002  2        68.7   66.0   77.3   69.3   58.7   51.6   48.7     6.8         3.4     11.3
  Cl. 003  3        62.7   60.1   68.0   65.9   53.2   49.0   44.9     6.2         5.8      7.9
* Cl. 007  7        55.9   51.8   58.2   53.9   40.6   42.8   41.6     3.9         2.1      6.4
  Cl. 011 11        51.0   49.7   56.7   53.1   46.8   34.9   33.6     6.8         3.5      7.0
          15        60.7   58.7   69.5   62.3   52.1   49.0   48.1     5.3         3.6     10.8
          18        57.3   57.1   69.3   57.8   51.3   34.8   33.1     9.9          .7     12.2
          22        61.7   58.8   67.8   61.3   53.6   48.8   47.6     5.3         2.6      9.0
          23        61.3   12.8   14.7   13.6   12.5   11.2   10.9     1.0          .8      1.9
          26        70.5   67.9   75.9   72.3   62.4   54.5   52.2     6.9         4.5      8.0
          28        68.8   68.6   75.2   73.3   66.6   45.4   44.4    11.3         4.7      6.6
          29        61.0   58.3   70.5   56.4   51.9   48.9   48.3     4.0        -1.9     12.2
  Cl. 004  4        54.8   54.2   61.6   59.1   51.3   39.1   38.1     7.7         4.8      7.4
  Cl. 005  5        82.3   81.9   93.7   83.5   71.7   61.3   60.1     9.1         1.6     11.8
  Cl. 006  6        65.3   61.7   72.6   64.4   58.7   53.4   52.1     4.2         2.7     10.9
  Cl. 008  8        77.2   73.6   79.7   77.4   72.2   65.2   64.1     4.4         3.9      6.1
  Cl. 009  9        67.6   64.0   75.1   65.7   60.5   54.4   53.7     5.4         1.7     11.1
* Cl. 010 10        82.0   78.4   91.2   73.7   62.0   60.4   60.0     7.9        -4.7     12.8
  Cl. 012 12        58.9   58.6   67.9   62.8   55.4   34.9   32.6    11.1         4.2      9.2
          13        56.8   53.6   63.2   57.0   50.9   43.3   42.1     5.4         3.4      9.6
          14        64.1   60.5   65.9   64.7   58.3   54.4   52.3     3.8         4.2      5.4
```

*Indicates 24-hour data available for these sites.

Figure 4.11-1. Example Computer Printout of Acoustical Measurement Data Reduction Program Showing Correspondence of Physical Monitoring Sites with Social Survey Clusters

but also at a number of other sites. In the physical monitoring program, sites are labeled by noise zone, so that the numbers may not correspond to the cluster numbers. You will go through the computer output and mark the corresponding cluster number adjacent to the physical monitoring site numbers. Figure 4.11-1 gives examples of how cluster numbers are matched to physical monitoring site numbers. In this example, the numbers tend to correspond, but this won't always be the case. For example, cluster 001 corresponds to site R1; cluster 002 corresponds to site R2; cluster 003 to R3, and so forth. However, sites R13, R14, R15, R18, R22, R23, R28 and R29 do not have corresponding survey clusters associated with them. For each cluster corresponding to a measurement site, the estimated L_{dn}, rounded off to a whole number, will be taken for the noise level at the cluster. In the given example, cluster 001 has an L_{dn} of 43.2, which, when rounded off, becomes 43; cluster 002 has an L_{dn} of 68.7 which, when rounded off, becomes 69; cluster 003 has an L_{dn} of 62.7 which, when rounded off, becomes 63, and so forth. A half decibel or more is always rounded up.

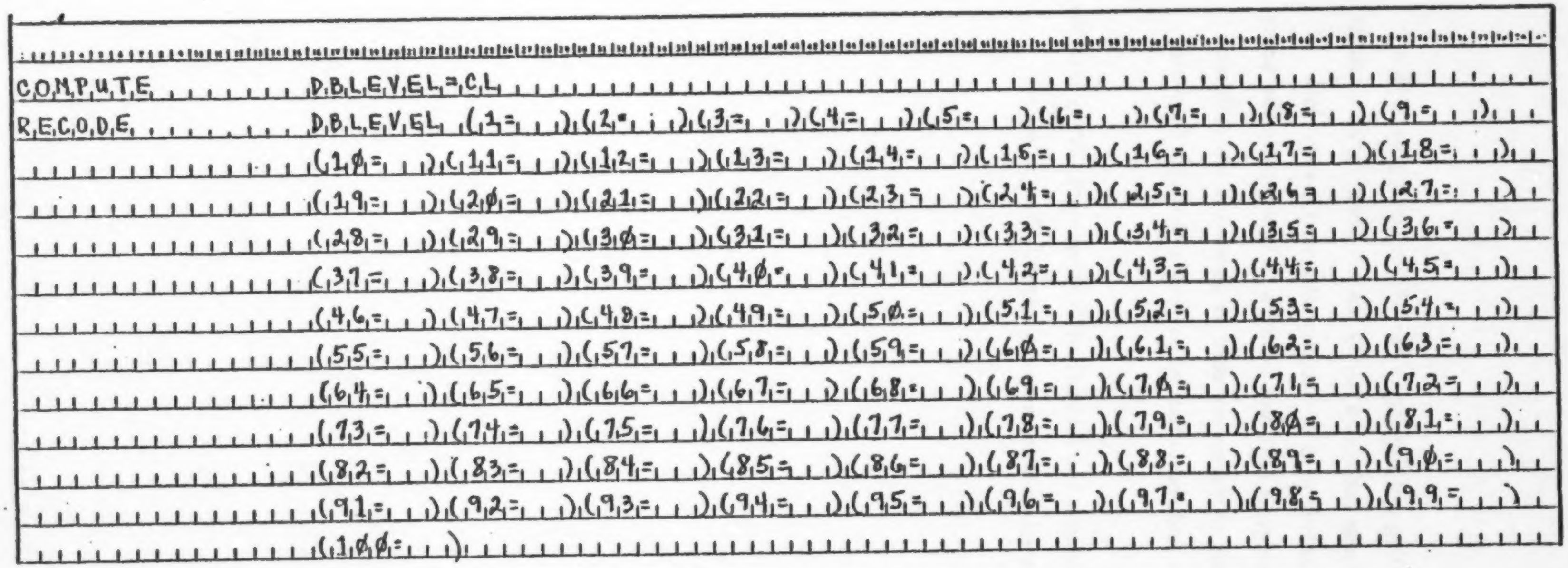
Third, the physical monitoring team may also have decided to take 24-hour measurements at some of the sites. Since 24-hour measurements are more accurate than 20-minute measurements, the values obtained for these sites should be used instead of the values printed from the 20-minute measurements. In the above example, 24-hour measurements have been taken at sites R2 (corresponding to cluster 002), R7 (corresponding to cluster 007), and R10 (corresponding to cluster 010). The values for the 24-hour measurements at these sites, therefore, should be used instead of the values on the computer printout (the 24-hour values are not shown here, but the 20-minute values on the printout are crossed out).

At the conclusion of this procedure, you should have a list which gives a unique L_{dn} (in whole numbers) for each and every cluster. The list should look like this:

Cluster #	L_{dn}
001	43
002	69
003	63
004	55
005	82
006	65
.	.
.	.
.	.
.	.
.	.
100	75

4.11.1 Preparing the Physical Data Deck

After you have compiled the list of L_{dn}'s for each cluster, it is an easy task to prepare the data deck for analysis. Figure 4.11-2 gives a computer coding form which you will fill out, tear off, and give to a keypuncher to punch. All the necessary information is already coded on the form with the exception of the noise levels for each cluster. You will write in the L_{dn} values in the appropriate two spaces for every cluster. If we take the above list as an example, on the card marked "RECODE..." where it says "DBLEVEL," for '(1 =)' you will write '43' in the two columns, for '(2 =)' you will write '74' in the two columns, and so forth. Each of the expressions inside the parentheses match the L_{dn} values with the associated cluster number. Cluster 001 (written as '1' on the computer form) has an L_{dn} value; cluster 002 has an L_{dn} value, and so on through cluster 100 which also has an L_{dn} value. Be sure that you enter an L_{dn} value for every cluster, and be sure that your handwriting is legible.



```
COMPUTE        DBLEVEL=CL
RECODE         DBLEVEL (1=  )(2=  )(3=  )(4=  )(5=  )(6=  )(7=  )(8=  )(9=  )
               (10=  )(11=  )(12=  )(13=  )(14=  )(15=  )(16=  )(17=  )(18=  )
               (19=  )(20=  )(21=  )(22=  )(23=  )(24=  )(25=  )(26=  )(27=  )
               (28=  )(29=  )(30=  )(31=  )(32=  )(33=  )(34=  )(35=  )(36=  )
               (37=  )(38=  )(39=  )(40=  )(41=  )(42=  )(43=  )(44=  )(45=  )
               (46=  )(47=  )(48=  )(49=  )(50=  )(51=  )(52=  )(53=  )(54=  )
               (55=  )(56=  )(57=  )(58=  )(59=  )(60=  )(61=  )(62=  )(63=  )
               (64=  )(65=  )(66=  )(67=  )(68=  )(69=  )(70=  )(71=  )(72=  )
               (73=  )(74=  )(75=  )(76=  )(77=  )(78=  )(79=  )(80=  )(81=  )
               (82=  )(83=  )(84=  )(85=  )(86=  )(87=  )(88=  )(89=  )(90=  )
               (91=  )(92=  )(93=  )(94=  )(95=  )(96=  )(97=  )(98=  )(99=  )
               (100=  )
```

NOTE: LETTER "O" IS WRITTEN "O"
NUMBER ZERO "0" IS WRITTEN "Ø"

Figure 4.11-2. Computer Coding Form for Physical Monitoring Data

After you have finished filling out the form, tear it out, and give it to a keypunch operator who will punch these cards and verify them. Then, wrap a rubber band around the punched deck and submit it to EPA along with your survey data card deck. The computer analysis program will now be able to incorporate the actual physical noise levels into the analysis of the survey data to determine the relationship between the residents' attitudes and the actual noise levels to which they are exposed.

Additional information regarding the Acoustical Measurement Survey and the data reduction computer program is available in separate manuals from EPA.

CHAPTER 5

Analysis of the Data

5.1 Overview of Computer Programs

The survey data will be reviewed and analyzed in three stages. A different type of computer program, with a unique purpose, is used at each stage. These are: the Cleaning Program; the Variance Program; and the Statistical Package for the Social Sciences (SPSS) Program. Details of these programs are available in a separate manual from EPA.

5.1.1 Cleaning Program

The cleaning program was devised to check the data for obvious errors, and for consistency. The basic way in which the program works is to read through the numbers punched in every column of every computer card submitted for analysis. For each column, a range or set of numbers is specified. These are the possible numbers which may have been coded for that column; for example, Column 10 of Card 01 must be punched with a number between 1 and 7 since the number in this column indicates AR (Area Number), and there can only be 1 to 7 areas. The program, then, checks for any numbers besides 1 through 7, since these would indicate an error. These specifications have been set for every single column of every card in the data deck. Additionally, the program checks that information is consistent. For example, Column 22 of Card 01, which indicates Total # on List, must always be equal to or greater than Column 23 of Card 01, R (Respondent) # on List. If this is not the case, then there is a coding or punching error.

Having gone through the data deck, the program will list the locations of all errors — the respondent ID number and the column which is in error — so that the type of error can be determined — keypunching, coding, or other (e.g., cards out of order, etc.). Then the problem can be investigated, often involving a referral to the original questionnaire. Finally, the errors can be corrected.

The data will be re-checked by the cleaning program to verify the correction of mistakes. Only when the deck is determined to be completely "clean," that is, when it meets all the specifications and has no errors, will the data proceed to the second stage of analysis.

5.1.2 Variance Program

The variance program calculates a measure of variability for particular sample characteristics (e.g., age, health), and attitudinal variables (e.g., evaluation of public services). It is calculated by the following formula:

$$\sigma^2 = \left(\frac{1-F}{n^2}\right)\left(\sum_c \left[(X_{2c} - Rn_{2c}) - (X_{2c-1} - Rn_{2c-1})\right]^2\right)$$

In the above equation, X denotes a respondent's score on a variable, R denotes the mean of the variable, n denotes the total number of respondents, c denotes the total number of clusters which had respondents, n_c denotes the number of respondents within the c^{th} cluster, and F is the sampling fraction defined by $(F = \frac{700}{MOS})$. The measure is obtained in order to check the precision or consistency of data which is gathered using the method of "cluster sampling." Cluster sampling is done because it is efficient in terms of cost and time; however, it tends to add to sampling variability. This effect is expected to be minimal. In the pre-test in Allentown, for example, the variability was approximately 4%; that is, the sample provided estimates which were consistent with one another within a plus or minus range of 4%. The variance program, then, calculates the variability for the sample so that the exact effect of cluster sampling is known.

5.1.3 SPSS Program

The "statistical package" is a program which has the capability to generate statistics which are most interesting and most meaningful for attitudinal data. For example, frequency distributions can be generated, and the mean, standard deviation, variance, and so forth, are calculated. Two-variable tables can also be generated, and the chi square statistic presented. More complex multivariate analysis, such as regressions and stepwise regressions, are also available in the statistical package. According to the schema for data analysis presented in Section 5.3, specific distributions, tables, and regression analyses will be generated.

5.2 List of Variables

This section presents a list of the variables derived from the questionnaire. There are two types of variables: basic and complex. A basic variable relates to a single item on the questionnaire – either a question, a precoded item such as card number, or an item from the checklist on the last page of the questionnaire. A complex variable, on the other hand, is a combination of a set of basic variables, and is computed by an arithmetic calculation such as adding the values of variables together, or squaring the value of a variable.

In the following lists, the variables are presented sequentially to correspond to the numerical order of questions on the questionnaire. The "Variable Name" is the name given to the variable in the SPSS program. In addition, a "Variable Label" is assigned to each variable, and provides more information to describe the variable. Therefore, whenever a variable is analyzed in the SPSS program, its Variable Name and Variable Label are used to identify it.

5.2.1 List of Basic Variables

Question Number	Variable Name	Variable Label
Precoded	ID	Respondent Identification Number
Precoded	NZONE	Noise Zone
Precoded	AREA	Residential Area of the City
Precoded	CLUSTER	Cluster Number
Precoded	CITY	City
Precoded	LABEL	Respondent Selection Label Number
Call Record Sheet	CALLS	Number of Calls to Make Contact
Call Record Sheet	CMPDAY	Day of Interview Completion
A3	QA3A	Number of Adults on List
A3	QA3B	Respondent Number on List
A3	QA3C	Reported Sex of Respondent

Question Number	Variable Name	Variable Label
A3	QA3D	Reported Age of Respondent
1	Q1 or YRSRES	Years of Residence in Area
2	Q2 or EVALAREA	General Evaluation of Area
3	Q3A	First Area Like - Specific
3	Q3B	Second Area Like - Specific
3	Q3C	Third Area Like - Specific
4	Q4A	First Area Problem - Specific
4	Q4B	Second Area Problem - Specific
4	Q4C	Third Area Problem - Specific
5a	Q5A	Severity of Traffic Problem
5b	Q5B	Severity of Polluted Water Problem
5c	Q5C or NOISPROB	Severity of Noise Problem
5d	Q5D	Severity of Crime Problem
5e	Q5E	Severity of Run-Down Area Problem
5f	Q5F	Severity of Unclean Air Problem
5g	Q5G	Severity of Parking Problem
5h	Q5H	Severity - Inadequate Low-Income Housing
6a	Q6A	Evaluation of Quality of Schools
6b	Q6B	Evaluation of Police Protection
6c	Q6C	Evaluation of Fire Protection
6d	Q6D	Evaluation of Recreation Facilities
6e	Q6E	Evaluation of Garbage Collection
6f	Q6F	Evaluation of Hospitals and Health
6g	Q6G	Evaluation of Public Transportation
6h	Q6H	Evaluation of Street Maintenance
6i	Q6I	Evaluation of Sewage and Drainage
6j	Q6J	Evaluation of General Pollution Control
6k	Q6K or NSECONTL	Evaluation of Noise Control

Question Number	Variable Name	Variable Label
7	Q7 or HEALTH	Rating of Overall Health Condition
8	Q8 or QUIET	Quietness or Noisiness of Area
9	Q9 or ANNOY	Overall Annoyance to Noise
10a	Q10A	Noise Interference During Sleeping
10b	Q10B	Noise Interference During Conversing
10c	Q10C	Noise Interference During Reading
10d	Q10D	Noise Interference During Resting
11a	Q11A	Morning
11b	Q11B	Afternoon
11c	Q11C	Evening
11d	Q11D	Nighttime
11e	Q11E	All the Time
11f	Q11F	Noise Never Annoys
12	Q12	Noise Affects Physical-Emotional Health
13a	Q13A	Noise Affects Headaches
13b	Q13B	Noise Affects Tiredness
13c	Q13C	Noise Affects Irritability
13d	Q13D	Noise Affects Hearing Loss
13e	Q13E	Noise Worsens Existing Health Problems
14	Q14	Accustomed to Noise
15a	Q15A	Use Soundproofing
15b	Q15B	Close Doors-Windows
15c	Q15C	Use Radio-TV-etc.
15d	Q15D	Wear Earplugs
15e	Q15E	Change Sleeping Quarters
15f	Q15F	Considered Moving
15g	Q15G	None of these

Question Number	Variable Name	Variable Label
16a	Q16A	Complain to Neighbor
16b	Q16B	Contacted Official
16c	Q16C	Took Legal Action
17a	Q17A or TRAFFIC	Annoyance to Traffic
17b	Q17B or MTRCYCLE	Annoyance to Motorcycles
17c	Q17C or TRUCKS	Annoyance to Trucks
17d	Q17D or BUSES	Annoyance to Buses
17e	Q17E or AUTOS	Annoyance to Automobiles
17f	Q17F or HIGHWAY	Annoyance to Highways or Freeways
17g	Q17G or RECRLVHC	Annoyance to Recreational Vehicles
17h	Q17H or GRBGETRK	Annoyance to Garbage Trucks
17i	Q17I or EMERGVHC	Annoyance to Emergency Vehicles
17j	Q17J or ENTMTCTR	Annoyance to Entertainment Centers
17k	Q17K or PETS	Annoyance to Pets or Animals
17l	Q17L or NBRHOMES	Annoyance to Neighbors' Homes
17m	Q17M or AIRCONDT	Annoyance to Air Conditioners
17n	Q17N or GRDNEQPT	Annoyance to Lawnmowers-Garden Equipment
17o	Q17O or JETS	Annoyance to Jet Airplanes
17p	Q17P or SMLPLANE	Annoyance to Small Airplanes
17q	Q17Q or HCOPTERS	Annoyance to Helicopters
17r	Q17R or TRAINS	Annoyance to Trains
17s	Q17S or CONSTRCN	Annoyance to Construction Noise
17t	Q17T or COMINDUS	Annoyance to Commerce-Industry Equipment
17ua	Q17UA	Annoyance to First Other Noise Source
17ub	Q17UB	Annoyance to Second Other Noise Source
18a	Q18A	Manufacturer
18b	Q18B	Operator-User
18c	Q18C	Local Government

Question Number	Variable Name	Variable Label
18d	Q18D	State Government
18e	Q18E	Federal Government
18f	Q18F	No One Responsible
19	Q19	Community Should Have Noise Control
19a	Q19A	Nothing Can Be Done About Noise
19b	Q19B	Not Bothered Enough By Noise
19c	Q19C	Not the Responsibility of Community
19d	Q19D	Too Costly
20	Q20	Extra Taxes for Noise Control Program
21a	Q21A	Make Noise Sources Quieter
21b	Q21B	Community Planning and Zoning
21c	Q21C	Building Codes
21d	Q21D	Curfews
21e	Q21E	Fines
21f	Q21F	Barriers
21g	Q21G	Traffic Planning
21h	Q21H	Public Information Campaign
22	Q22 or AGE	Age of Respondent
23	Q23 or EDUCLVL	Educational Level of Respondent
24, 24a	Q24	Present Employment Status
25, 25a	Q25	Occupation
26	Q26 or INCOME	Yearly Household Income
27	Q27	Racial Heritage of Respondent
28	Q28 or OWNER	Ownership Status of House or Apartment
29	Q29	Number of Persons in Household
Calculated	TIME	Time of Interview in Minutes
B1	QB1 or SEX	Sex of Respondent
B2	QB2	Building Capacity

Question Number	Variable Name	Variable Label
B3	QB3 or STRTDIST	Distance from Building to Street
B4	QB4	Construction Type of Building
B5	QB5	Sex of Interviewer
B6	QB6	Language of Interview

IF PHYSICAL MONITORING IS CONDUCTED, THERE IS ONE ADDITIONAL VARIABLE.

Physical Monitoring	DBLEVEL	Noise Level

5.2.2 List of Compound Variables

Variables Making Up Compound	Variable Name	Variable Label
Q10 through Q10D	ACTIVITY	Noise Interference During Activities
Q12, Q13A through Q13E (standardized)	HLTHPROB	Noise Impact on Health
Q5A, Q5B, Q5D through Q5H	URBPROB	Severity of Major Urban Problems
Q6A through Q6K	PUBSERV	General Evaluation of Public Services
Q15A through Q15E	PREVENT	Number of Personal Preventive Actions
Q16A through Q16C	COMPLNT	Public Complaints Made
Q19, Q20, Q21 (standardized)	SUPPORT	Support for Noise Control Program
Q9	HIGHLY	Percentage Highly Annoyed

IF PHYSICAL MONITORING IS CONDUCTED, THERE IS ONE ADDITIONAL VARIABLE.

DBLEVEL	DBLVLSQR	Noise Level X Noise Level

5.3 Levels of Analysis

The data analysis provides information on three levels. The first level presents data on the city as a whole. The second level presents data comparing the areas of the city with one another, while the third level looks at the interrelationship between various factors affecting individuals. Therefore, from the first level of analysis, you will know what the city as a whole feels about noise; from the second level, you can say how the different areas vary from one another; and from the third level, you can look at why people have the perceptions and attitudes they do.

5.3.1 The Analysis Schema

The method for handling the data is a causal path schema in which an assumed set of hypotheses is linked to form a chain reaction. The first link is assumed to influence the second link, which is assumed to influence the third link, and so forth.

The schema is a set of hypotheses which simplifies analysis by imposing order on the data. Consider that in this questionnaire, there are more than 100 variables. If each variable were compared with every other, there would be more than 20,000 comparisons; if a table were presented for each comparison, there would be more than 20,000 tables. The impossibility of handling this information is apparent. By imposing a schema, however, the amount of information to interpret is considerably simplified. While the schema gives considerable information, it is not as complex as a total output of the questionnaire data would be.

Within each link in the chain, the hypothesis is analyzed in three ways. First, simple description. This involves the individual variables and their distributions, means and standard deviations. Basic information about the city is provided (e.g., what do the residents think? What range of answers do they give?) Second, tabular description. Selected relationships between variables are explored. Normally, this is done by looking at tables comparing two variables (cross-tabulations). This tells something about the way one variable changes in relation to another (e.g., how does annoyance change in the various areas of the city? How does a person's health condition affect their annoyance to noise?). Finally, for every link in the chain, a third level of analysis is provided to give more detailed and more accurate information, multi-variate description. This involves a number of multiple regression equations.

In a multiple regression analysis, a number of independent variables is assumed to influence a dependent variable. This analysis takes the form of

$$y = a_1x_1 + a_2x_2 + a_3x_3 + \dots a_nx_n + C + e$$

where

$a_1 \dots a_n$ are regression coefficients,

$x_1 \dots x_n$ are variables,

C is a constant, and

e is the error term.

For example, consider the determinants of noise annoyance. How much is annoyance due to the actual physical noise level around an individual's residence? How much is it due to the individual's age (older persons may be more sensitive)? How much is it due to the individual's educational background (e.g., a more educated individual may be more aware of the problems of noise)? A regression equation having all three of these possible causes (physical noise level, age, and education) as independent variables and annoyance as the dependent variable facilitates this analysis. It will tell how much each of the individual variables contributes to the overall annoyance in relation to the other variables. It may be the case, for example, that the physical noise level is the dominant variable and the social variables are unimportant. Or that age may be extremely important, but that education is not. Certainly, then, the interpretation of the results is complex. To simply the analysis, a stepwise regression procedure is used in which only the most significant independent variables are brought into the equation – one step at a time. Thus, only the most salient explanatory factors are identified.

5.3.2 The Causal Path Model

The analysis utilizes 11 conceptual groups. Each of these is assigned a symbol for identification.

1. Properties of the Noise Environment (NOISE)
    - a. Noise Zone
    - b. Noise Level (if physical monitoring is complete)
2. Characteristics of the Population (CITYPOP)
    - c. Residential Area of the City
    - d. Residential-Housing Characteristics of the Population
    - e. Social Characteristics of the Population
3. General Health Characteristics of the Population (HEALTH)
    - f. Rating of Overall Health Condition
4. Perception of the Noise Environment (QUIET)
    - g. Quietness or Noisiness of the Area
5. Perceptions of Problems in the Area (PROBLEMS)
    - h. Perception of Noise as a Problem
    - i. Perception of Urban Problems
6. Evaluation of the Area (EVALUATE)
    - j. General Evaluation of the Area
    - k. Reasons for Liking the Area
    - l. Evaluation of Public Services
7. Extent to Which Noise Affects Residents (EFFECTS)
    - m. Extent to Which Noise Interferes with Activities
    - n. Extent to Which Noise Affects Health Conditions
    - o. Extent Accustomed to Noise
    - p. Most Annoying Time Period

8. Annoyance to Noise (ANNOY)

   q. Overall Annoyance to Noise

9. Noise Sources Which Are Annoying (SOURCES)

   r. Annoyance to Specific Noise Sources

10. Measures Taken to Reduce Noise (MEASURES)

   s. Preventive Actions Taken
   t. Public Complaints Made

11. Support for a Noise Control Program (SUPPORT)

   u. Willingness to Support Noise Control

Some of the groups have sub-groups which are discussed shortly. The 11 groupings are used in the causal path model, but group 9 is also analyzed separately. Groups 1, 2, and 3 are defined as the ultimate independent variables in the model. They are assumed to be "given" conditions and are not explained; that is, the noise environment, the residential area of the city, and residential-housing characteristics, the social characteristics, and the general health condition of the respondent are considered properties of the individual, independent of noise impact and perception of noise. While there are interrelationships between these givens, for the purpose of the analysis, they are assumed to be independent predictors of noise perception and impact.

The causal chain operates in the following way. The first three (1,2,3) groups affect the individual's perception of how quiet or noisy the area is (group 4). These four groups, in turn, affect the individual's perception of problems in the area (group 5), which all in turn influence the individual's evaluation of the area (group 6). These six groups then combine to affect the individual's health and activities (group 7). These seven groups combine to influence the annoyance to noise (group 8). Specific noise sources that might affect individuals are analyzed at this point. On the basis of this information, it is possible to understand how the first eight groups plus the specific sources influence preventive measures taken by the individual (group 10). Finally, the 10 groups (including group 9) combine to influence the individual's support for a noise control program (group 11). Figure 5.3-1 illustrates the causal chain. The model is cumulative in that effects become additive.

For example, the following relationships are suggested by the model. First, the individual's background characteristics – his or her residential and housing characteristics (CITYPOP), his or her health condition (HEALTH), as well as the actual noise environment in which he or she lives (NOISE) – affects the individual's perception of the noise environment (QUIET). The individual items making up the background characteristics – items a through f – are tested against how quiet or noisy the individual perceives the area to be. In the multiple regression model, the question "How much do these three groups (1,2,3) explain the individual's perception of noise?" is explored. The assumption is that characteristics of the individual partly account for the individual evaluation of the area and sensitivity to noise.

Second, the model suggests that the perception of problems in the area (PROBLEMS) is a product of the individual and residential characteristics of the respondent (NOISE, CITYPOP, HEALTH), as well as due to the perception of the noise environment (QUIET). The model tests the assumption that the perception of noise (QUIET) influences the perception of problems (PROBLEMS) by introducing QUIET as an independent variable to predict PROBLEMS. Subsequently, the evaluation of the area (EVALUATE) is assumed to be a product of all the previous products; that is, people will evaluate the area positively or negatively depending on how noisy it actually is (NOISE), how noisy or quiet they perceive it to be (QUIET), how many other problems they perceive in the area (PROBLEMS), and their own particular background and residential characteristics (CITYPOP, HEALTH).

The model proceeds in a similar manner through the 11 groups. Finally, then, it argues that support for a noise control program (SUPPORT) is a function of the noise environment in which the individual lives, the background and health characteristics of the individual, the residential and housing characteristics, the perception of the

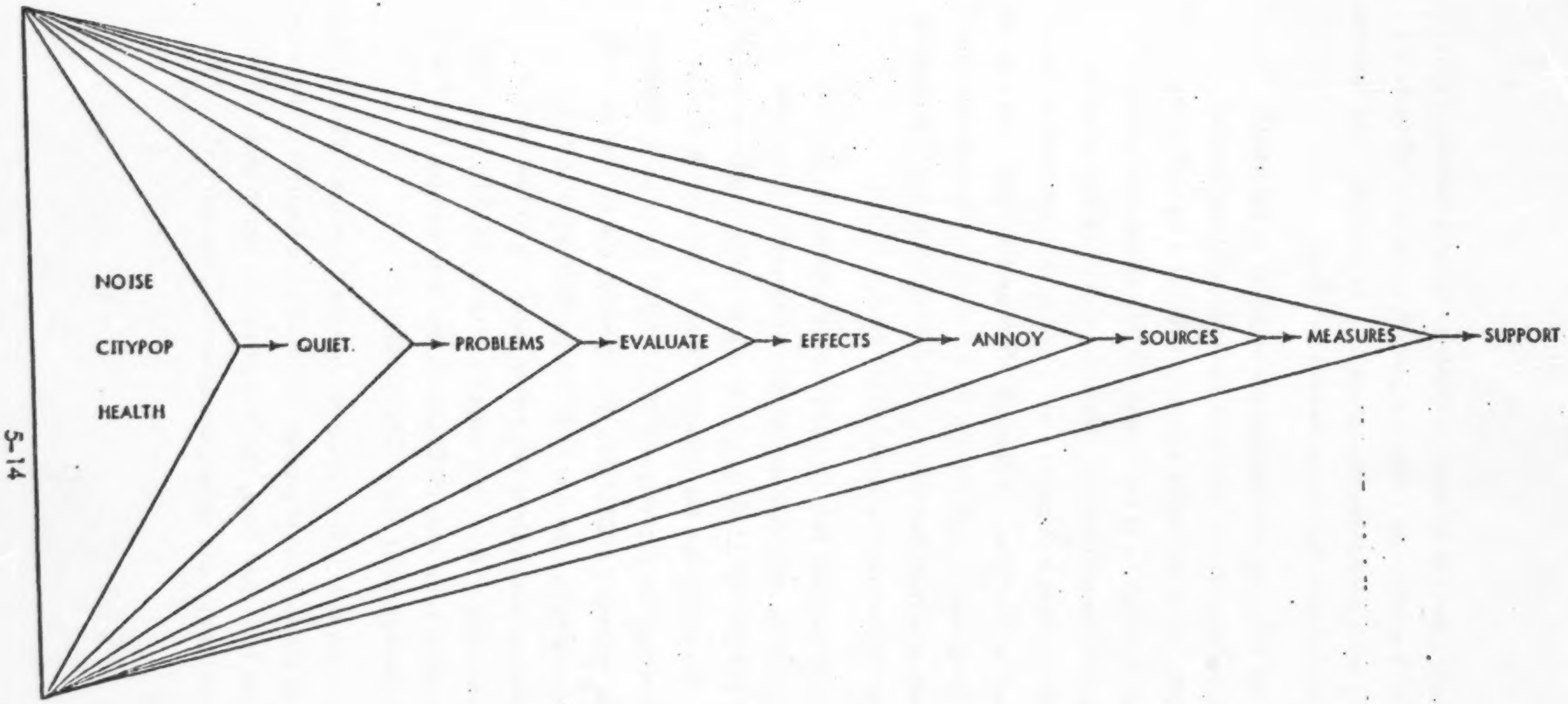

NOISE
CITYPOP
HEALTH
QUIET.
PROBLEMS
EVALUATE
EFFECTS
ANNOY
SOURCES
MEASURES
SUPPORT

Figure 5.3-1.A Causal Path Model of Noise Perception and Impact

noise environment, the perception of problems in the environment, the evaluation of the area, the extent to which the individual is affected by noise, the annoyance reaction to noise, and the extent to which preventive measures have been taken to reduce noise.

5.3.3 Specific Variables Making Up Conceptual Areas

The 11 conceptual groups outlined in Figure 5.3-1 are actually a set of variables which incorporate the entire questionnaire. Many of the variables are examined only by themselves. Others are brought into the multiple regression equations. Some new variables are created by combining several variables. Each of these 11 groups is discussed below. A variable is referred to by its "Variable Name" given in the list of variables in Section 5.2. At the end of each discussion, those variables used in the multiple regression models are defined; they are called indices.

Properties of the Noise Environment (NOISE)

This group is made up of three variables. Before physical monitoring is completed, there is only a crude measure of the noise environment – the noise zone (NZONE). The zones are numbered so that higher numbered zones are assumed to have higher average noise levels and thus the codes provide a rough measure of noise environment. However, if physical monitoring data is available, the noise environment can be assessed more accurately. In this case, each cluster will have a unique day-night noise level – L_{dn}. This information will be brought into the analysis as a variable called DBLEVEL, Noise Level.

If DBLEVEL is defined, however, an additional variable is also created. This is DBLVLSQR, or Noise Level X Noise Level. This is based on the assumption that the individual's perception and reaction to noise are not a linear function of the actual noise level, but rather a curvilinear relation (increasing in a quadratic manner with exposure to noise). Thus, a quadratic component is defined to test the assumption.

For cross-tabulations, only the linear component is used. For multiple regressions, however, both the linear and quadratic variables are used. (Note that if physical monitoring is not complete, NZONE is used in regressions, but it is not squared.) These two indices are used in the regression analysis:

Note: The computer program uses the variable name DBLEVEL in regressions whether or not physical monitoring data are available. If the data are not available, DBLEVEL takes the value of NZONE for each case and the variable DBLVLSQR is not computed.

1. Noise Level (DBLEVEL)
2. Noise Level X Noise Level (DBLVLSQR)

Characteristics of the Population (CITYPOP)

This group is made up of three sub-groups: the residential area of the city, the residential-housing characteristics, and the social characteristics of the residents.

Residential Area of City

Since areas typically differ from one another, especially as they affect residents, this gives greater insight into the distribution of noise and the social reactions to it. This variable – the residential areas of the city (AREA) – is used in the cross-tabulations to contrast with various reactions to noise; it is not used in the multiple regression models.

Residential-Housing Characteristics

This sub-group is made up of two finer sub-divisions: the residential status of the respondent, and the housing characteristics of the respondent. The residential status is one variable – the years of residence in the area (Q1 or YRSRES). This variable is used for both cross-tabulations and for the multiple regression models.

The housing characteristics of the respondent are measured by four variables: (1) the ownership status of the house or apartment (Q28 or OWNER); (2) the number of families living in the residential building (QB2); (3) the distance from the building to the street (QB3 or STRTDIST); and (4) the type of construction of the building (QB4). The ownership status (OWNER) and the distance from the building to the street (STRTDIST) are used in both the cross-tabulations and the multiple regression analysis, whereas the other two variables are used in cross-tabulations only.

Therefore, three indices are used in multiple regression models:

1. Years of Residence in Area (YRSRES)
2. Ownership Status of House/Apartment (OWNER)
3. Distance from Building to Street (STRTDIST)

Social Characteristics

This sub-group has two subdivisions: the demographic characteristics of the residents, and the socio-economic characteristics of the residents. The demographic characteristics are measured by the age (Q22 or AGE), sex of the respondent (QB1 or SEX), racial heritage (Q27), and the size of the household (Q29). Sex is coded as a dummy variable (females are scored '1' and males are scored '0'). AGE and SEX are brought into the multiple regression models, as well as used in cross-tabulations.

The socio-economic characteristics are measured by the educational level (Q23 or EDUCLVL), the employment status (Q24A), the occupation of the respondent (Q25, Q25A), and the income level of the household (INCOME). Educational level and income are used in the multiple regression models.

Therefore, there are four indices which are used in the multiple regression models:

1. Age of Respondent (AGE)
2. Sex of Respondent (SEX)
3. Educational Level (EDUCLVL)
4. Yearly Household Income (INCOME)

General Health Characteristics (HEALTH)

This group is made up of a general question asking for an evaluation of the respondent's general health condition (Q7 or HEALTH). It is used in the multiple regression models and is, therefore, an index:

1. Rating of Overall Health Condition (HEALTH)

Perception of the Noise Environment (QUIET)

This group consists of one variable assessing the quietness or noisiness of the area in which the respondent lives (Q8 or QUIET). The variable is scored so that "Very Quiet" is high, and "Very Noisy" is low; it is used in both cross-tabulations and multiple regression equations.

1. Quietness or Noisiness of Area (QUIET)

Perception of Problems in the Area (PROBLEMS)

This group is made of up three sub-groups: (1) a list of problems which the respondent mentions spontaneously (Q4A, Q4B, Q4C); (2) severity of noise as a problem (Q5C or NOISPROB); and (3) the severity of certain major urban problems: Traffic Congestion (Q5A), Polluted Water (Q5B), Crime (Q5D), Run-Down Area in Need of Improvement (Q5E), Unclean Air (Q5F), Parking (Q5G), and Inadequate Low-Income Housing (Q5H).

The first sub-group – list of problems – is presented as a list giving the relative frequencies of the various problems. This list is presented in the Coding Handbook. The second sub-group – severity of noise as a problem – is used in both cross-tabulations and in multiple regression models. The third sub-group – an index of the severity of urban problems (except for noise) – is defined by taking the average evaluation of severity for the seven items making up the index (Q5A, Q5B, Q5D, Q5E, Q5F, Q5G, Q5H or URBPROB). Thus, two indices are defined:

1. Severity of Noise Problem (NOISPROB)
2. Severity of Major Urban Problems (URBPROB)

Evaluation of the Area (EVALUATE)

This group is made up of four sub-groups: (1) a general evaluation of the area (Q2 or EVALAREA), (2) a list of reasons for liking the area (Q3A, Q3B, Q3C), (3) the evaluation of several public services: Quality of Schools (Q6A), Police Protection (Q6B), Fire Protection (Q6C), Recreation Facilities (Q6D), Garbage

Collection (Q6E), Hospitals and Health Facilities (Q6F), Public Transportation (Q6G), Street Maintenance (Q6H), Sewage and Drainage (Q6I), General Pollution Control (Q6J), and (4) Evaluation of Noise Control (Q6K or NSECONTL).

The list of reasons for liking the area is presented in tabular form, giving the frequencies of different reasons; the codes are presented in the Coding Handbook. The general evaluation of the area is used as an index in the multiple regression models. Also, an index of the evaluation of various public services is defined by taking the average evaluation for the 10 public services (Q6A - Q6J or PUBSERV). The evaluation of noise control is a separate index. Therefore, there are three indices:

1. General Evaluation of Area (EVALAREA)
2. Evaluation of Public Services (PUBSERV)
3. Evaluation of Noise Control (NSECONTL)

Extent to Which Noise Affects Residents (EFFECTS)

The group is made up of four sub-concepts: (1) the extent to which noise interferes with activities (Q10A - Q10D or ACTIVITY); (2) the time period during which noise is most annoying (Q11A - Q11F); (3) the extent to which the respondent has become accustomed to noise (Q14); and (4) the extent to which noise affects health conditions (Q12, A13A - Q13E or HLTHPROB).

The first sub-group, ACTIVITY, is made up of four variables indicating interference with (a) Sleeping, (b) Talking or Listening to the Radio, (c) Reading, and (d) Resting. The second sub-group is one question which assesses the most annoying time period, Q11. The third sub-group assesses the extent to which the respondent has become accustomed to noise, Q14. The fourth sub-group assesses whether the respondent perceives noise as affecting his or her health (Q12) and five particular symptoms which might be impacted: Headaches (Q13A), Tiredness (Q13B), Irritability (Q13C), Hearing Loss or Difficulties (Q13D), and Causing an Existing Health Problem to Worsen (Q13E). These six latter variables are combined to form an index of general health effects caused by noise (HLTHPROB).

There are two indices, therefore, which are used in the multiple regression models:

1. Noise Interference During Activities (ACTIVITY)
2. Noise Impact on Health (HLTHPROB)

Annoyance to Noise (ANNOY)

This group is made up of one variable assessing the degree of annoyance to noise in the area (Q9 or ANNOY). It is calculated in two ways: (1) as a seven-point scale, and (2) as a dummy variable whereby 'Tremendously' or 'Highly' Annoyed are scored as '1' and other scale points as '0'. The first use (ANNOY) assesses the overall annoyance reaction and is used as an index in the multiple regression equations. The second use calculates only the percentage who are highly annoyed (or more); it is used in cross-tabulations where the percentage of highly annoyed is a more sensitive variable of noise impact. Thus, there is one index:

1. Overall Annoyance to Noise (ANNOY)

Specific Noise Sources Which are Annoying (SOURCES)

In Q17, the respondent is given a list of 20 noise sources and is asked to rate how annoying each source is. The responses give a specific analysis of the types of noise sources that may be impacting the residents. It is presented in cross-tabulations in order to understand how sources vary according to area and according to noise zone. All 20 sources (TRAFFIC to COMINDUS) are also used in subsequent multiple regression equations.

Preventive Measures Taken to Reduce Noise (MEASURES)

This group is made up of two sub-groups: (1) preventive measures taken personally to reduce noise (Q15A through Q15F or PREVENT), and (2) public complaints made (Q16A through Q16C or COMPLNT). The first sub-group is made up of a list of several preventive measures which may have been taken to reduce noise: Using Insulation or Soundproofing (Q15A), Closing Doors (Q15B), Masking Noise with a Radio or TV (Q15C), Wearing Earplugs (Q15D), Changing Sleeping Quarters (Q15E), and Considered Moving (Q15F). An index is made up from these six variables – Number of Personal Preventive Actions (PREVENT).

The second sub-group lists three possible public complaints that might have been made: Complaining to a Neighbor About Making Too Much Noise (Q16A), Writing, Telephoning or Visiting an Official (Q16B), and Initiating Legal Action (Q16C). These three items are combined into an index – Public Complaints Made (COMPLNT).

There are, therefore, two indices which are used in the multiple regression models:

1. Number of Personal Preventive Actions (PREVENT)
2. Public Complaints Made (COMPLNT)

Support for a Noise Control Program (SUPPORT)

This group is made up of five sub-groups: (1) which body should be responsible for reducing noise (Q18); (2) whether the respondent supports a noise control program (Q19); (3) why the respondent feels there should not be a noise control program, if he/she does not want one (Q19A); (4) the willingness to pay extra taxes for a noise control program (Q20); and (5) a list of possible noise control options: Making Noise Sources Quieter (Q21A), Community Planning and Zoning (Q21B), Building Codes (Q21C), Curfews (Q21D), Fines for Making Too Much Noise (Q21E), Barriers (Q21F), Traffic Planning (Q21G), and Public Information Campaign (Q21H).

Three items are combined to form an index of support for a noise control program (SUPPORT): whether the respondent supports a noise control program, the willingness to pay extra taxes for a noise control program, and the number of possible noise control options that the respondent wants.

There is, therefore, one index used in the multiple regression models:

1. Support for Noise Control Program (SUPPORT)

5.3.4 The SPSS Output: Specific Frequency Distributions, Cross-Tabulations, and Regressions

The data output is ordered according to the 11 groups.

Group 1: Properties of the Noise Environment (NOISE)

1. Distributions:
   - a. NZONE
   - b. DBLEVEL (if physical monitoring is complete)

Group 2: Characteristics of the Population (CITYPOP)

1. Distributions:
   - a. AREA
   - b. AGE
   - c. SEX
   - d. EDUCLVL
   - e. Employment Status (Q24)
   - f. Occupational Group (Q25)
   - g. INCOME
   - h. Racial Heritage (Q27)
   - i. YRSRES
   - j. OWNER
   - k. Household Size (Q29)
   - l. Building Capacity (QB2)
   - m. Construction Type (QB4)
2. Cross-Tabulations:
   - a. AREA x NZONE
   - b. AREA x AGE
   - c. AREA x EDUCLVL
   - d. AREA x Employment Status (Q24)

e. AREA x Occupational Group (Q25)

f. AREA x INCOME

g. AREA x YRSRES

h. AREA x Household Size (Q29)

Group 3: General Health Characteristics (HEALTH)

1. Distributions:

   a. HEALTH

2. Cross-Tabulations:

   a. HEALTH x AREA

   b. HEALTH x DBLEVEL (if physical monitoring is complete)

Group 4: Perception of the Noise Environment (QUIET)

1. Distributions:

   a. QUIET

2. Cross-Tabulations:

   a. QUIET x AREA

   b. QUIET x DBLEVEL (if physical monitoring is complete)

Group 5: Perception of Problems in the Area (PROBLEMS)

1. Distributions:

   a. List of Specific Problems (Q4A, Q4B, Q4C)

   b. NOISPROB

   c. Other Urban Problems (Q5A, Q5B, Q5D, Q5E, Q5F, Q5G, Q5H)

2. Cross-Tabulations:

   a. List of Specific Problems (Q4A, Q4B, Q4C) x AREA
   b. NOISPROB x AREA
   c. NOISPROB x HEALTH
   d. URBPROB x AREA

Group 6: Evaluation of the Area (EVALUATE)

1. Distributions:

   a. EVALAREA
   b. List of Reasons for Liking Area (Q3A, Q3B, Q3C)
   c. Rating of Public Services (Q6A - Q6J)
   d. NSECONTL

2. Cross-Tabulations:

   a. EVALAREA x AREA
   b. EVALAREA x QUIET
   c. List of Reasons for Liking Area (Q3A, Q3B, Q3C) x AREA
   d. Rating of Public Services (Q6A - Q6J) x AREA
   e. NSECONTL x AREA
   f. NSECONTL x NOISPROB

Group 7: Extent to Which Noise Affects Residents (EFFECTS)

1. Distributions:

   a. Four Activities (Q10A - Q10D)
   b. Time Period (Q11)
   c. Accustomed to Noise (Q14)
   d. Noise Affects Health (Q12)
   e. Five Symptoms Caused by Noise (Q13A - Q13E)

2. Cross-Tabulations:

   a. Noise Affects Health (Q12) x AREA
   b. Noise Affects Health (Q12) x AGE
   c. Noise Affects Health (Q12) x SEX
   d. Noise Affects Health (Q12) x Occupational Group (Q25)
   e. Noise Affects Health (Q12) x HEALTH
   f. Noise Affects Health (Q12) x Accustomed to Noise (Q14)
   g. Four Activities (Q10A – Q10D) x DBLEVEL (if physical monitoring is complete)

Group 8: Annoyance to Noise (ANNOY)

1. Distributions:

   a. ANNOY
   b. HIGHLY

2. Cross-Tabulations:

   a. ANNOY x AREA
   b. ANNOY x NZONE
   c. ANNOY x Construction Type (QB4)
   d. ANNOY x QUIET
   e. ANNOY x Noise Affects Health (Q12)
   f. ANNOY x Accustomed to Noise (Q14)
   g. HIGHLY x DBLEVEL (if physical monitoring is complete)

Group 9: Specific Noise Sources Which Are Annoying (SOURCES)

1. Distributions:

   a. All 20 Noise Sources (TRAFFIC to COMINDUS)
   b. Other Noise Sources Mentioned (Q17UA, Q17UB)

2. Cross-Tabulations:
    - a. All 20 Noise Sources (TRAFFIC to COMINDUS) x AREA
    - b. All 20 Noise Sources (TRAFFIC to COMINDUS) x NZONE

Group 10: Preventive Measures Taken to Reduce Noise (MEASURES)

1. Distributions:
    - a. Preventive Actions (Q15A - Q15G)
    - b. Public Complaints Made (Q16A - Q16C)
2. Cross-Tabulations:
    - a. Preventive Actions (Q15A-Q15G) x AREA
    - b. Preventive Actions (Q15A-Q15G) x Accustomed to Noise (Q14)
    - c. Public Complaints Made (Q16A-Q16C) x AREA

Group 11: Support for a Noise Control Program (SUPPORT)

1. Distributions:
    - a. Body Responsible for Reducing Noise (Q18A - Q18F)
    - b. Community Should Have Noise Control (Q19)
    - c. Why No Noise Control (Q19A-Q19D)
    - d. Extra Taxes for Noise Control Program (Q20)
    - e. List of Noise Control Options (Q21A - Q21H)
2. Cross-Tabulations:
    - a. Community Should Have Noise Control (Q19) x AREA
    - b. Community Should Have Noise Control (Q19) x Occupational Group (Q25)
    - c. Community Should Have Noise Control (Q19) x INCOME
    - d. Community Should Have Noise Control (Q19) x AREA
    - e. List of Noise Control Options (Q21A - Q21h) x AREA

Group 12: Multiple Regression Models

All multiple regression models use a "stepwise" procedure where only the most significant variables are brought into the equation. If physical monitoring is not complete, DBLEVEL assumes the value of NZONE for each case and DBLVSQR is not computed.

3. Multiple Regression Models

	Dependent Variable	Independent Variables
a.	DBLEVEL	AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER
b.	HEALTH	DBLEVEL, DBLVLSQR, AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER, STRTDIST
c.	QUIET	DBLEVEL, DBLVLSQR, AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER, STRTDIST, HEALTH
d.	NOISPROB	DBLEVEL, DBLVLSQR, AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER, STRTDIST, HEALTH, QUIET
e.	URBPROB	DBLEVEL, DBLVLSQR, AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER, STRTDIST, HEALTH QUIET, NOISPROB
f.	PUBSERV	DBLEVEL, DBLVLSQR, AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER, STRTDIST, HEALTH, QUIET, NOISPROB, URBPROB
g.	EVALAREA	DBLEVEL, DBLVLSQR, AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER, STRTDIST, HEALTH, QUIET, URBPROB, PUBSERV
h.	ACTIVITY	DBLEVEL, DBLVLSQR, AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER, STRTDIST, HEALTH, QUIET, NOISPROB, URBPROB, PUBSERV, EVALAREA

	Dependent Variable	Independent Variable
i.	HLTHPROB	DBLEVEL, DBLVLSQR, AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER, STRTDIST, HEALTH, QUIET, NOISPROB, URBPROB, PUBSERV, EVALAREA, ACTIVITY
j.	ANNOY	DBLEVEL, DBLVLSQR, AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER, STRTDIST, HEALTH, QUIET, NOISPROB, URBPROB, PUBSERV, EVALAREA, ACTIVITY, HLTHPROB
k.	PREVENT	DBLEVEL, DBLVLSQR, AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER, STRTDIST, HEALTH, QUIET, NOISPROB, URBPROB, PUBSERV, EVALAREA, ACTIVITY, HLTHPROB, ANNOY, TRAFFIC to COMINDUS
l.	COMPLNT	DBLEVEL, DBLVLSQR, AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER, STRTDIST, HEALTH, QUIET, NOISPROB, URBPROB, PUBSERV, EVALAREA, ACTIVITY, HLTHPROB, ANNOY, TRAFFIC to COMINDUS, PREVENT
m.	SUPPORT	DBLEVEL, DBLVLSQR, AGE, SEX, EDUCLVL, INCOME, YRSRES, OWNER, STRTDIST, HEALTH, QUIET, NOISPROB, URBPROB, PUBSERV, EVALAREA, ACTIVITY, HLTHPROB, ANNOY, TRAFFIC to COMINDUS, PREVENT, COMPLNT

4. Correlation Matrix

a. All variables used in regression analysis.

Group 13: Characteristics of the Survey

1. Distributions:

   a. Day of Interview Completion (CMPDAY)
   b. Number of Calls to Make Contact (CALLS)
   c. Number of Adults on List (QA3A)
   d. Respondent Number on List (QA3B)
   e. Time of Interview in Minutes (TIME)

LIST OF
APPENDICES

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Pages A-i and A-ii are blank

APPENDIX A

List of U.S. Environmental Protection Agency Regional Noise Abatement Offices

U.S. Environmental Protection Agency

Federal Regional Council Offices

Region

I

c/o Federal Regional Council Secretariat
John F. Kennedy Bldg.
Boston, MA 02203

(617) 233-5421

II

26 Federal Plaza
New York, NY 10007

(212) 264-8068

III

Federal Bldg.
600 Arch Street
Philadelphia, PA 19106

(215) 597-9815

IV

c/o Federal Regional Council
1371 Peachtree Street, NW
Atlanta, GA 30309

(404) 526-2287

V

300 S. Wacker Drive
Chicago, IL 60606

(312) 353-4000

VI

c/o Southwest Federal Regional Council
1100 Commerce Street
Dallas, TX 75202

(214) 749-1431

VII

Federal Office Bldg.
911 Walnut Street
Kansas City, MO 64106

(816) 374-2661

Region

VIII c/o Federal Regional Council
Federal Bldg.
1961 Stout Street
Denver, CO 80802

(303) 837-2741

IX 450 Golden Gate Avenue
P.O. Box 36098
San Francisco, CA 94102

(415) 556-8200

X Arcade Plaza Bldg.
1321 2nd Avenue
Seattle, WA 98101

(206) 442-1593

APPENDIX B

Sample Materials

FORM A	Cluster Selection Worksheet
FORM B	Worksheet for Cluster Sampling Interval
FORM C	List of Selected Clusters
FORM D	Identifying Streets and Map of Selected Cluster
FORM E	Lister's Sketch of Selected Cluster
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FORM G	Listing Log Sheet
FORM H	Worksheet for Household Sampling Interval
FORM I	Interviewer's Cluster Map

Example Letter of Introduction to Selected Households

FORM A

CLUSTER SELECTION WORKSHEET

Noise Zone ______________

Area ______________

Page _____ of _____

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Tract & Block #	Estimate of Block MOS	Updated Estimate of MOS	Cumulative MOS	Estimated MOS Range	X

FORM B-1

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

- Calculate the sampling interval K by dividing the total number of estimated households (i.e., cumulative MOS) by 100:

$$K = \frac{\_\_\_\_\_\_\_\_}{100} = \_\_\_\_\_\_\_\_$$

		Additions		Truncated #	
1.	Take the random number R = C1 =	________	truncate:	________	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.
2.	Add K to C1: Write K here	+ ________			
	The sum = C2 =	________	truncate:	________	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.
3.	Add K to C2: Write K here	+ ________			
	The sum = C3 =	________	truncate:	________	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.
4.	Add K to C3: Write K here	+ ________			
	The sum = C4 =	________	truncate:	________	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-2

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions   Truncated #

Write C4 here ________

5. Add K to C4:
Write K here + ________

The sum = C5 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

6. Add K to C5:
Write K here + ________

The sum = C6 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

7. Add K to C6:
Write K here + ________

The sum = C7 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

8. Add K to C7:
Write K here + ________

The sum = C8 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

9. Add K to C8:
Write K here + ________

The sum = C9 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-3

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions Truncated #

Write C9 here ________

10. Add K to C9
Write K here + ________

The sum = C10 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

11. Add K to C10
Write K here + ________

The sum = C11 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

12. Add K to C 11
Write K here + ________

The sum = C 12 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

13. Add K to C 12
Write K here + ________

The sum = C 13 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

14. Add K to C13
Write K here + ________

The sum = C14 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions   Truncated #

Write C14 here ______

15. Add K to C 14
Write K here + ______

The sum = C 15 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

16. Add K to C 15
Write K here + ______

The sum = C16 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

17. Add K to C16
Write K here + ______

The sum = C 17 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

18. Add K to C 17
Write K here + ______

The sum = C18 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

19. Add K to C18
Write K here + ______

The sum = C19 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-5

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions Truncated #

Write C19 here ________

20. Add K to C19
Write K here + ________

The sum = C20 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

21. Add K to C20
Write K here + ________

The sum = C21 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

22. Add K to C21
Write K here + ________

The sum = C22 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

23. Add K to C22
Write K here + ________

The sum = C23 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

24. Add K to C23
Write K here + ________

The sum = C24 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-6

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions Truncated #

Write C24 here ________

25. Add K to C24
Write K here + ________

The sum = C25 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

26. Add K to C25
Write K here + ________

The sum = C26 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

27. Add K to C26
Write K here + ________

The sum = C27 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

28. Add K to C27
Write K here + ________

The sum = C28 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

29. Add K to C28
Write K here + ________

The sum = C29 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-7

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions Truncated #

Write C29 here ________

30. Add K to C29
Write K here + ________

The sum = C30 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

31. Add K to C30
Write K here + ________

The sum = C31 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

32. Add K to C31
Write K here + ________

The sum = C32 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

33. Add K to C 32
Write K here + ________

The sum = C33 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

34. Add K to C33
Write K here + ________

The sum = C34 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-8

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions ______ Truncated #

Write C34 here ______

35. Add K to C34
Write K here + ______

The sum = C35 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

36. Add K to C35
Write K here + ______

The sum = C36 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

37. Add K to C36
Write K here + ______

The sum = C37 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

38. Add K to C37
Write K here + ______

The sum = C38 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

39. Add K to C38
Write K here + ______

The sum = C39 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions Truncated #

Write C39 here ________

40. Add K to C39
Write K here + ________

The sum = C40 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

41. Add K to C 40
Write K here + ________

The sum = C 41 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

42. Add K to C41
Write K here + ________

The sum = C42 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

43. Add K to C 42
Write K here + ________

The sum = C 43 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

44. Add K to C 43
Write K here + ________

The sum = C 44 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-10

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

		Additions	Truncated #	
	Write C44 here	______		
45.	Add K to C44 Write K here	+ ______		
	The sum = C45 =	______	truncate: ______	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.
46.	Add K to C45 Write K here	+ ______		
	The sum = C46 =	______	truncate: ______	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.
47.	Add K to C46 Write K here	+ ______		
	The sum = C47 =	______	truncate: ______	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.
48.	Add K to C47 Write K here	+ ______		
	The sum = C48 =	______	truncate: ______	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.
49.	Add K to C48 Write K here	+ ______		
	The sum = C 49 =	______	truncate: ______	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-11

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions — Truncated #

Write C49 here ________

50. Add K to C 49
Write K here + ________

The sum = C 50 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

51. Add K to C 50
Write K here + ________

The sum = C 51 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

52. Add K to C 51
Write K here + ________

The sum = C 52 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

53. Add K to C 52
Write K here + ________

The sum = C 53 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

54. Add K to C 53
Write K here + ________

The sum = C 54 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-12

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions   Truncated #

Write C54 here ________

55. Add K to C 54
Write K here + ________

The sum = C55 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

56. Add K to C 55
Write K here + ________

The sum = C 56 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

57. Add K to C 56
Write K here + ________

The sum = C57 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

58. Add K to C 57
Write K here + ________

The sum = C 58 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

59. Add K to C 58
Write K here + ________

The sum = C59 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-13

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions Truncated #

Write C59 here ________

60. Add K to C59
Write K here + ________

The sum = C60 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

61. Add K to C60
Write K here + ________

The sum = C61 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

62. Add K to C61
Write K here + ________

The sum = C62 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

63. Add K to C62
Write K here + ________

The sum = C63 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

64. Add K to C63
Write K here + ________

The sum = C64 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-14

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions Truncated #

Write C64 here ______

65. Add K to C64
Write K here + ______

The sum = C65 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

66. Add K to C65
Write K here + ______

The sum = C66 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

67. Add K to C 66
Write K here + ______

The sum = C67 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

68. Add K to C 67
Write K here + ______

The sum = C68 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

69. Add K to C 68
Write K here + ______

The sum = C 69 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-15

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions   Truncated #

Write C69 here ________

70. Add K to C69
Write K here + ________

The sum = C70 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

71. Add K to C70
Write K here + ________

The sum = C71 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

72. Add K to C71
Write K here + ________

The sum = C 72 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

73. Add K to C 72
Write K here + ________

The sum = C73 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

74. Add K to C 73
Write K here + ________

The sum = C74 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-16

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

		Additions	Truncated #	
	Write C74 here			
75.	Add K to C74 Write K here	+		
	The sum = C75 =		truncate:	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.
76.	Add K to C75 Write K here	+		
	The sum = C76 =		truncate:	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.
77.	Add K to C76 Write K here	+		
	The sum = C77 =		truncate:	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.
78.	Add K to C77 Write K here	+		
	The sum = C78 =		truncate:	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.
79.	Add K to C78 Write K here	+		
	The sum = C79 =		truncate:	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-17

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions Truncated #

Write C79 here ________

80. Add K to C79
Write K here + ________

The sum = C80 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

81. Add K to C80
Write K here + ________

The sum = C81 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

82. Add K to C81
Write K here + ________

The sum = C82 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

83. Add K to C82
Write K here + ________

The sum = C83 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

84. Add K to C83
Write K here + ________

The sum = C84 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-18

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions   Truncated #

Write C84 here ________

85. Add K to C84
Write K here + ________

The sum = C85 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

86. Add K to C85
Write K here + ________

The sum = C86 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

87. Add K to C86
Write K here + ________

The sum = C87 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

88. Add K to C87
Write K here + ________

The sum = C88 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

89. Add K to C88
Write K here + ________

The sum = C89 = ________ truncate: ________ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions Truncated #

Write C89 here ______

90. Add K to C89
Write K here + ______

The sum = C90 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

91. Add K to C90
Write K here + ______

The sum = C91 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

92. Add K to C91
Write K here + ______

The sum = C92 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

93. Add K to C92
Write K here + ______

The sum = C93 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

94. Add K to C93
Write K here + ______

The sum = C94 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

Additions ______ Truncated #

Write C94 here ______

95. Add K to C94
Write K here + ______

The sum = C95 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

96. Add K to C95
Write K here + ______

The sum = C96 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

97. Add K to C96
Write K here + ______

The sum = C97 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

98. Add K to C97
Write K here + ______

The sum = C98 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

99. Add K to C98
Write K here + ______

The sum = C99 = ______ truncate: ______ Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

FORM B-21

WORKSHEET FOR CLUSTER SAMPLING INTERVAL

		Additions	Truncated #	
	Write C99 here	________		
100.	Add K to C99 Write K here	+ ________		
	The sum = C100=	________	truncate: ________	Locate this number in Col. 5 of Form A. Mark with an X in Col. 6.

LIST OF SELECTED CLUSTERS

Page 1 of 4

Column 1 Noise Zone	Column 2 Area	Column 3 Tract & Block(s) #	Column 4 MOS	Column 5 Cluster #
				001
				002
				003
				004
				005
				006
				007
				008
				009
				010
				011
				012
				013
				014
				015
				016
				017
				018
				019
				020
				021
				022
				023
				024
				025

LIST OF SELECTED CLUSTERS

Page 2 of 4

Column 1 Noise Zone	Column 2 Area	Column 3 Tract & Block(s) #	Column 4 MOS	Column 5 Cluster #
				026
				027
				028
				029
				030
				031
				032
				033
				034
				035
				036
				037
				038
				039
				040
				041
				042
				043
				044
				045
				046
				047
				048
				049
				050

FORM C-3

LIST OF SELECTED CLUSTERS

Page 3 of 4

Column 1 Noise Zone	Column 2 Area	Column 3 Tract & Block(s) #	Column 4 MOS	Column 5 Cluster #
				051
				052
				053
				054
				055
				056
				057
				058
				059
				060
				061
				062
				063
				064
				065
				066
				067
				068
				069
				070
				071
				072
				073
				074
				075

LIST OF SELECTED CLUSTERS

Page 4 of 4

Column 1 Noise Zone	Column 2 Area	Column 3 Tract & Block(s) #	Column 4 MOS	Column 5 Cluster #
				076
				077
				078
				079
				080
				081
				082
				083
				084
				085
				086
				087
				088
				089
				090
				091
				092
				093
				094
				095
				096
				097
				098
				099
				100

FORM D

IDENTIFYING STREETS AND MAP OF SELECTED CLUSTER

Cluster # ________

Surrounding Streets: ________________________________
____
____
____

Lister ______________________________

Place an 'X' on the most northwest corner and an arrow indicating the clockwise direction.

FORM E

LISTER'S SKETCH OF SELECTED CLUSTER

FORM F-1

HOUSEHOLD LISTING FORM

Cluster # ____

Page 1 of ____

Lister ____

LIST ONLY THOSE HOUSEHOLDS INDICATED BY ARROWS ON THE CLUSTER MAP.

(If an address is unclear, write a good description.)

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
X	Household #	Street #	Apt. #	N/S/E/W	Street Name	Ave/Street/Drive
	1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					

For Office
Use Only

FORM F-2

HOUSEHOLD LISTING FORM

Cluster # ________

Page 2 of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					

For Office
Use Only

FORM F-3

HOUSEHOLD LISTING FORM

Cluster # ________

Page 3 of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	26					
	27					
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					

For Office

FORM F-4

HOUSEHOLD LISTING FORM

Cluster # ________

Page __4__ of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	41					
	42					
	43					
	44					
	45					
	46					
	47					
	48					
	49					
	50					
	51					
	52					
	53					
	54					
	55					

For Office
Use Only

FORM F-5

HOUSEHOLD LISTING FORM

Cluster # ________

Page 5 of ____

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
X	Household #	Street #	Apt. #	N/S/E/W	Street Name	Ave/Street/Drive
	56					
	57					
	58					
	59					
	60					
	61					
	62					
	63					
	64					
	65					
	66					
	67					
	68					
	69					
	70					

For Office
Use Only

FORM F-6

HOUSEHOLD LISTING FORM

Cluster # ________

Page 6 of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	71					
	72					
	73					
	74					
	75					
	76					
	77					
	78					
	79					
	80					
	81					
	82					
	83					
	84					
	85					

For Office
Use Only

HOUSEHOLD LISTING FORM

Cluster # ________

Page 7 of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	86					
	87					
	88					
	89					
	90					
	91					
	92					
	93					
	94					
	95					
	96					
	97					
	98					
	99					
	100					

For Office Use Only

FORM E-8

HOUSEHOLD LISTING FORM

Cluster # ________

Page 8 of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	___01					
	___02					
	___03					
	___04					
	___05					
	___06					
	___07					
	___08					
	___09					
	___10					
	___11					
	___12					
	___13					
	___14					
	___15					

For Office
Use Only

FORM E-9

HOUSEHOLD LISTING FORM

Cluster # ________

Page __9__ of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	___16					
	___17					
	___18					
	___19					
	___20					
	___21					
	___22					
	___23					
	___24					
	___25					
	___26					
	___27					
	___28					
	___29					
	___30					

For Office
Use Only

FORM F-10

HOUSEHOLD LISTING FORM

Cluster #________

Page _10_ of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	__31					
	__32					
	__33					
	__34					
	__35					
	__36					
	__37					
	__38					
	__39					
	__40					
	__41					
	__42					
	__43					
	__44					
	__45					

For Office
Use Only

FORM F-11

HOUSEHOLD LISTING FORM

Cluster # ________

Page 11 of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	___46					
	___47					
	___48					
	___49					
	___50					
	___51					
	___52					
	___53					
	___54					
	___55					
	___56					
	___57					
	___58					
	___59					
	___60					

For Office
Use Only

FORM F-12

HOUSEHOLD LISTING FORM

Cluster # ________

Page 12 of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	__61					
	__62					
	__63					
	__64					
	__65					
	__66					
	__67					
	__68					
	__69					
	__70					
	__71					
	__72					
	__73					
	__74					
	__75					

For Office
Use Only

FORM F-13

HOUSEHOLD LISTING FORM

Cluster # ________

Page 13 of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	76					
	77					
	78					
	79					
	80					
	81					
	82					
	83					
	84					
	85					
	86					
	87					
	88					
	89					
	90					

For Office
Use Only

FORM F-14

Cluster # ________

Page __14__ of ______

HOUSEHOLD LISTING FORM

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	___ 91					
	___ 92					
	___ 93					
	___ 94					
	___ 95					
	___ 96					
	___ 97					
	___ 98					
	___ 99					
	___ 00					

For Office
Use Only

LISTING LOG SHEET

Page 1 of 4

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Cluster #	Lister	Logged Out	Logged In	Checked	# of Households	# of Selections
001						
002						
003						
004						
005						
006						
007						
008						
009						
010						
011						
012						
013						
014						
015						
016						
017						
018						
019						
020						
021						
022						
023						
024						
025						

FORM G-2

LISTING LOG SHEET

Page 2 of 4

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Cluster #	Lister	Logged Out	Logged In	Checked	# of Households	# of Selections
026						
027						
028						
029						
030						
031						
032						
033						
034						
035						
036						
037						
038						
039						
040						
041						
042						
043						
044						
045						
046						
047						
048						
049						
050						

FORM G-3

LISTING LOG SHEET

Page 3 of 4

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Cluster #	Lister	Logged Out	Logged In	Checked	# of Households	# of Selections
051						
052						
053						
054						
055						
056						
057						
058						
059						
060						
061						
062						
063						
064						
065						
066						
067						
068						
069						
070						
071						
072						
073						
074						
075						

LISTING LOG SHEET

Page 4 of 4

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Cluster #	Lister	Logged Out	Logged In	Checked	# of Households	# of Selections
076						
077						
078						
079						
080						
081						
082						
083						
084						
085						
086						
087						
088						
089						
090						
091						
092						
093						
094						
095						
096						
097						
098						
099						
100						

FORM H-1

WORKSHEET FOR HOUSEHOLD SAMPLING INTERVAL

Cluster # ________

EXPECTED NUMBER OF HOUSEHOLDS (from Column 4 of Form C)	ACTUAL NUMBER OF HOUSEHOLDS (from Column 6 of Form G)
X = ________	Y = ________

- Calculate the sampling interval S:

$$S = \frac{X}{7} = \frac{\_\_\_\_\_\_}{7} = \_\_\_\_\_\_$$

- Round this number to 1 decimal place:

S = ________

- Calculate the approximate number of household selections N:

$$N = \frac{Y}{S} = \_\_\_\_\_\_ = \_\_\_\_\_\_$$

		Additions		Truncated #	
1.	Take the random number R = H1 =	______	truncate:	______	Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.
2.	Add S to H1: Write S here	+ ______			
	The sum = H2 =	______	truncate:	______	Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.
3.	Add S to H2: Write S here	+ ______			
	The sum = H3 =	______	truncate:	______	Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.
4.	Add S to H3: Write S here	+ ______			
	The sum = H4 =	______	truncate:	______	Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

FORM H-2

WORKSHEET FOR HOUSEHOLD SAMPLING INTERVAL

Additions Truncated #

H4 = ________

5. Add S to H4:
Write S here + ________

The sum = H5 = ________ truncate: ________ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

6. Add S to H5:
Write S here + ________

The sum = H6 = ________ truncate: ________ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

7. Add S to H6:
Write S here + ________

The sum = H7 = ________ truncate: ________ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

8. Add S to H7:
Write S here + ________

The sum = H8 = ________ truncate: ________ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

9. Add S to H8:
Write S here + ________

The sum = H9 = ________ truncate: ________ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

10. Add S to H9:
Write S here + ________

The sum = H10 = ________ truncate: ________ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

FORM H-3

WORKSHEET FOR HOUSEHOLD SAMPLING INTERVAL

Additions   Truncated #

H10 = ________

11. Add S to H10:
Write S here + ________

The sum = H11 = ________ truncate: ________ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

12. Add S to H11:
Write S here + ________

The sum = H12 = ________ truncate: ________ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

13. Add S to H12:
Write S here + ________

The sum = H13 = ________ truncate: ________ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

14. Add S to H13:
Write S here + ________

The sum = H14 = ________ truncate: ________ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

15. Add S to H14:
Write S here + ________

The sum = H15 = ________ truncate: ________ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

16. Add S to H15:
Write S here + ________

The sum = H16 = ________ truncate: ________ Locate this number in Col. 2 of Form F. Mark with an X in Col. 1.

FORM I

INTERVIEWER'S CLUSTER MAP

Cluster # ________

Surrounding Streets: ______________________________

____

____

____

Interviewer ______________________________ ID# __________

The 'X's indicate the approximate locations of the households to contact.

Notes to Interviewer:

Example Letter of Introduction to Selected Households

– (YOUR LETTERHEAD) –

Dear Resident:

We are writing you to request your help in a very important study. We represent the (YOUR ORGANIZATION) in the City of (________________) and are conducting a detailed study concerning the community's attitudes toward the environment. We feel it is vital that the public's opinions be considered regarding future environmental planning.

Your household has been scientifically selected as part of a sample that represents the opinions of your community. By taking such a sample we can be confident that the community as a whole will be represented. To insure this, we need your own participation; otherwise, certain sections of the community will not be fairly represented. We therefore hope that you will extend your cooperation, as the information gathered will be important to you as a citizen of (_________) and to the community as a whole.

Within the next few days, a member of your community representing the City of (______) will be calling on you in order to arrange an interview. This interviewer carries credentials and will not try to sell you anything.

The interview consists of two parts. First, a 5-minute preliminary interview in order to find out which person in your household is to be interviewed. Since we scientifically sample (Your City), we must use a mathematical technique to determine which person in your household should be interviewed. Only one person per household can be interviewed. After the selected individual has been contacted, there will be the interview, which should take 20 to 30 minutes.

The selected person's name will not be associated with his or her opinions. This interview will be combined with others in the sample in order to give information about the community as a whole. In this way, valuable information about the environment will be gathered, which will help us improve the quality of future city planning.

We very much hope you will agree to participate in this valuable study. If you would like to call and arrange an appointment, please call us at

(Your Organization)
(Telephone Number)

We will be happy to answer any questions about the study.

Sincerely,

(Name)

APPENDIX C

Table of Random Numbers

	0	1	2	3	4	5	6	7	8	9
0	89504	50343	69562	76450	07216	54825	88662	72223	57650	03053
	99440	95949	00056	50322	71544	55311	83470	79888	59155	22234
	25635	72045	63980	07086	64163	50285	65629	51922	12873	74667
	27726	95196	25262	58011	94543	34533	60049	15307	21700	32299
	74270	41547	55200	30074	48185	32948	65440	81421	10420	09330
1	70297	00130	70006	69513	68338	79481	85199	70809	32155	77918
	05998	50657	43543	02539	43120	80366	14150	53100	18078	55827
	33636	06908	48351	88790	51214	58813	03648	11109	83141	63758
	94884	20647	95625	25252	51279	80377	36424	71468	59331	31487
	55770	43720	68466	27829	92446	55822	82003	12385	84785	59570
2	11527	83995	17789	33031	57473	27004	12267	04539	22618	51565
	15907	04935	60636	97603	24959	02101	09882	60461	49030	71023
	50225	47509	49445	47415	30641	67886	28920	67659	97112	49802
	34041	21376	91954	35796	62527	93226	32757	50309	04233	75837
	18727	86610	66405	28859	53833	16045	06220	83649	44514	97618
3	19008	61372	20167	23329	68337	34250	85080	83044	41467	02969
	72858	68636	49252	28172	12304	86358	91662	14114	69235	69883
	43476	96324	05807	90059	28906	16659	69749	78976	47538	97193
	15200	63589	27060	34838	79164	21892	29737	75837	23190	81138
	45563	78333	91891	75369	13490	11284	88208	56171	57429	59427
4	42139	87949	64267	78892	67591	20743	26673	33710	10469	02738
	16181	21913	46462	16178	27622	23760	29400	64109	10906	00199
	64109	33330	79253	69188	41137	97103	18702	93235	96318	10864
	64701	86746	44094	55762	65443	98757	49291	04152	67929	60402
	53610	15546	07669	19441	86559	94895	69337	61216	34223	49989
5	08583	01801	93830	51083	90221	08086	05486	06728	73536	15134
	16322	20909	22743	74286	82548	19795	28760	93517	77430	53045
	14863	95969	16522	08776	39316	15298	12005	78025	10396	71428
	17640	70543	25794	54982	57400	76849	40774	00898	66867	57658
	80543	86750	54719	71767	75369	39369	77560	07740	55747	27242
6	90178	43813	50758	96805	90285	65423	62511	54641	79767	99887
	17161	93321	68311	01085	08718	54325	01878	45672	60497	75018
	14109	16612	70760	37604	59260	77853	39611	55495	69957	70871
	63047	44584	93153	86527	06388	86861	17455	89719	58364	60682
	09839	41666	71338	23047	70229	46853	96554	52774	49032	40496
7	31810	29842	26057	67456	53769	22804	56155	12279	78825	88732
	27242	32407	77132	64764	41781	96619	20319	31963	31206	50939
	62845	79300	26834	32918	98568	57931	89445	82536	04821	35460
	00384	31907	32454	36094	13670	70856	34557	60552	40228	45554
	73890	95086	13228	57064	44799	68622	78702	67839	92752	06513
8	79201	02630	66298	43378	24718	85182	11822	22674	96518	25672
	06613	20700	05402	70278	62397	23126	05516	40071	04628	34925
	97377	87469	70806	03566	84252	05967	89034	40199	53199	51593
	64572	37879	47104	52698	12176	31602	06491	85979	23842	44859
	54118	19252	89076	30315	84005	42823	72856	11733	81914	10766
9	10445	21826	88731	11610	45639	94340	96006	02784	07160	72031
	71897	54717	46546	21849	70005	97125	25796	51123	11940	95522
	02125	50209	54761	58944	20178	16274	66430	50211	89452	66032
	25476	32694	81348	58670	70807	56555	23959	92298	51580	78636
	26842	20700	26136	56054	84571	22006	04312	59957	32213	78683

	0	1	2	3	4	5	6	7	8	9
0	55065	45888	99373	93405	45777	33170	42705	63283	67536	86161
	23981	32029	56110	97230	47051	82707	22930	88399	32315	47798
	27197	90942	80798	81736	88218	42155	94225	80901	63041	49462
	38856	80036	31231	61750	34971	42690	85594	88915	35810	70331
	90166	96703	61667	76674	16473	50785	63734	34891	32213	40275
1	01440	66547	12854	18480	28838	63317	67826	17254	64379	40000
	95048	61371	61465	87559	80567	67848	12458	08390	35922	60829
	30971	47426	49779	73122	08312	65977	28065	92041	32861	91064
	20259	08772	43078	44244	43468	69440	35653	73732	06162	04368
	62479	26663	50244	78214	87898	28323	32653	97952	88278	15391
2	36599	09386	71344	66239	58413	74187	71304	80176	18606	13324
	63017	75783	45708	79057	26774	50914	44880	79249	68968	45920
	14776	48386	92497	93538	18778	46653	04049	12316	54499	49928
	62714	53271	66420	72918	64240	55946	44726	44332	07956	68286
	10185	44373	25806	70863	94918	74252	33753	02773	18258	43217
3	97985	41063	43479	18036	40992	48216	88633	69384	08710	92754
	67191	79419	79157	13836	85594	13177	08093	05520	36920	91651
	78362	97020	82310	91525	64812	39579	54521	13132	72158	94405
	84265	68307	00674	42851	66765	88312	41660	17606	39915	92118
	81057	82178	15168	54574	44125	75219	23829	09608	96938	90406
4	71189	89156	01138	62143	16522	62524	36331	10354	58335	32873
	43225	12569	98746	74850	50858	11199	94620	05476	61049	06637
	98949	86205	28703	40992	21132	58647	68999	06308	82352	79019
	13646	51537	36079	61116	55136	45771	63800	84969	26233	52661
	32904	46520	81883	02427	96370	03744	77423	99067	61619	73984
5	68121	53489	32566	77484	67117	95612	88273	17943	90649	96401
	85789	68450	89194	97116	98396	29293	47354	91398	92216	36392
	83485	91495	24773	48622	89599	31652	53293	50400	13180	50577
	78314	15438	75892	68578	24510	80501	13451	35871	49556	08629
	82163	69325	42315	58216	12452	29890	89798	49791	70362	67315
6	88758	66753	48054	02853	20438	14590	23468	95522	32294	68741
	38723	93698	14023	66575	15480	64166	02509	42403	69750	77937
	44832	38495	92186	16105	62549	16259	52280	90098	17679	91031
	74379	77286	57010	01209	60561	75692	52063	95648	81598	41825
	62971	49189	68412	86946	76614	25033	88841	77395	03699	94510
7	00004	79633	31412	09026	63486	54440	72717	47523	70136	74290
	91053	46491	07502	72685	96260	63323	38506	16017	95256	59076
	98550	98596	01977	78091	96166	75562	86534	49531	19828	81580
	46432	92717	24041	25190	55226	87281	51850	78768	55342	36492
	25592	57842	30951	52093	09533	27007	91545	25078	95053	77185
8	77547	86941	26473	91577	18653	94351	45697	69405	31930	11235
	08426	71209	94405	24990	06382	35570	46501	80867	79274	40760
	78800	43187	45395	93727	28571	44100	64537	97230	50200	04099
	85709	63396	12640	45461	39804	03760	70481	35171	58938	32796
	46211	11457	12813	82920	65936	16072	58548	80849	86066	33725
9	19890	74209	79329	23186	91829	14949	85443	87573	42968	65696
	27236	71046	45690	20159	53631	49407	83594	56041	07102	22343
	24483	07181	56128	09870	18165	06936	57893	21713	25679	19286
	98564	69345	30482	90046	64523	20558	77190	34763	82921	41719
	92937	32469	24676	64104	68331	72041	73326	55394	02995	47090

	0	1	2	3	4	5	6	7	8	9
0	67911	66738	28635	67749	75608	57308	48875	10448	96723	67782
	13991	98488	79459	09004	20522	26652	67975	24182	90750	47790
	89081	78040	84456	57037	11897	89316	09011	85733	54640	06797
	78951	63829	26073	94660	97218	48734	13950	83938	67837	69976
	11131	85320	07091	35356	70901	76435	97754	40205	60622	15478
1	26678	29496	44485	78222	15196	08938	55916	87877	78678	37808
	09581	35312	56850	39051	02884	52966	84629	32573	69644	63291
	21898	03020	25007	84804	28242	26536	80883	69617	22950	94640
	63506	61338	25718	69967	49014	67678	46782	27074	15298	73470
	27573	03948	65890	78636	05912	80071	23281	20910	07523	82453
2	03138	71866	94400	68728	61513	02277	75192	15037	05043	19050
	78841	98262	13366	92863	85850	95480	44379	02087	62407	16851
	09190	35244	63247	06941	54755	93065	60483	53191	60517	61113
	72538	18957	55368	13934	22574	15038	06785	69336	38229	94400
	07827	55713	82634	09650	98385	82602	95515	10464	04533	34979
3	14748	83245	45869	48368	49205	25220	48102	44565	58375	01704
	95263	65925	89253	37124	99369	77329	76801	57012	37446	20323
	82772	49071	79989	83625	05320	73837	80721	18200	26093	10604
	52442	54845	30596	08541	80811	63828	47478	44406	16603	44586
	51371	46509	01833	39817	22531	06214	06982	42729	39772	89625
4	27541	67871	21364	11062	47397	54317	16330	48733	69427	62346
	81807	77402	69819	53561	95589	98301	15180	05206	18072	88131
	40401	56915	03866	80516	46258	88137	75333	86818	83684	75880
	67197	01964	24113	52022	23655	78530	02002	78264	14724	79999
	51276	47059	09676	39632	71047	37179	92901	88802	26649	08457
5	08217	21428	95522	55205	23491	31129	07141	33708	77019	45341
	42443	37801	82143	51632	06494	17255	25592	58460	14144	99989
	23539	75126	06959	37126	30899	62450	87547	77811	22731	98041
	78827	18694	87223	01285	64760	02823	67521	78009	09048	58683
	94271	46844	93583	11561	54752	10087	55900	43062	81246	04645
6	52059	93184	48885	57782	87367	99272	62734	37989	02917	93439
	48772	28025	68837	72720	44585	75319	98273	27217	18545	94753
	42748	97248	26397	57721	29676	81606	25775	78590	46720	32386
	78401	18137	59698	74345	16044	78530	42366	09131	70553	26119
	65668	16453	69566	18406	53032	45963	79958	15685	82495	90613
7	02311	10251	09461	91132	50849	04644	56698	58720	69176	83844
	39822	51711	38227	57846	64804	85631	02384	76354	81259	57272
	34984	61371	73225	81334	11985	13373	49665	49301	23485	66572
	50738	63774	84456	41004	13865	36092	81392	73021	04317	96106
	69574	68899	89212	76904	78353	63192	72590	50201	75782	14380
8	32468	40150	32253	92348	91268	99878	10755	85644	97984	98765
	96754	39213	10353	56276	47300	58032	04472	03464	21981	66035
	04279	65542	72062	71448	86639	90740	36240	13732	20885	10630
	97298	28618	38808	06836	22527	80821	99577	80148	81545	45517
	34391	88883	92984	16894	63657	53977	58555	31131	18589	20325
9	22397	98183	57065	03710	28665	68440	31946	19543	32983	08756
	47733	18199	42413	43647	11763	10085	01117	02377	98193	35314
	38728	55266	73637	72917	40778	84562	45581	43021	81825	10070
	43042	50131	98416	12888	88667	35260	62878	85723	67146	34475
	19423	16423	89879	50470	70445	42182	58151	76351	25407	41714

	0	1	2	3	4	5	6	7	8	9
	35176	96851	46623	97107	39964	71003	19679	34929	06188	98162
	53515	94677	87252	81605	88680	28560	21277	24839	86693	63719
0	94942	41794	46507	12111	40337	93792	74320	78224	22299	80032
	18854	44491	17452	80448	24839	62787	74416	74579	78379	47364
	75863	88880	40570	94426	06503	68829	18017	35258	97645	61227
	70865	09786	12257	68851	78174	46677	98859	55977	99367	02938
	19083	05492	19887	23254	95240	52663	54793	01055	11851	02184
1	24813	46296	60129	60085	21696	58307	39200	21650	64906	25653
	24697	67797	81685	17835	62015	35014	01376	51705	26672	52964
	85276	49734	83398	57007	66140	22333	82467	27292	23295	63900
	29506	57956	71659	04003	02907	96873	53826	52500	49576	85840
	03303	67969	09358	91597	15640	54862	93557	22111	08278	00267
2	99125	86774	67595	16419	22440	63483	61137	12110	31013	46570
	25298	95187	69449	39352	07685	16068	63663	08782	55117	03788
	11969	90651	88645	52760	09046	86831	60881	14586	60616	87897
	61115	19295	64300	19256	75274	84275	59301	13627	61753	66492
	56094	68431	06992	84959	41773	01870	86023	05439	98085	11843
3	95647	45399	59432	14517	19301	22413	02839	32878	77500	50576
	59661	49175	70505	42128	51419	64934	13764	16947	92794	42994
	58466	72478	49842	09009	32808	52393	41953	22869	61102	45733
	92201	60794	88665	87111	17930	53016	06181	94110	10368	08496
	13255	17858	97573	63411	90599	89998	58595	76614	74313	62400
4	33835	95297	47110	27342	57761	23780	16344	05549	37593	55584
	64402	05903	27825	43000	34603	21064	84558	03675	95768	81309
	02585	85913	45415	45848	17481	57205	57160	16489	76576	18231
	80395	20667	10187	94569	20564	49162	48927	35493	26783	16235
	81285	78139	23483	35790	48448	83782	24319	80659	91337	79119
5	02821	20768	14232	96750	09075	10898	28820	89604	58259	79654
	23732	08581	09196	39184	09039	49907	76289	30314	63491	19677
	93649	23706	30767	56278	01429	37708	96791	48149	29363	11177
	71534	69948	76858	13937	16339	13154	88208	79988	82488	17291
	47370	54813	96986	39802	51924	04001	31542	71096	79337	88987
6	48295	30266	28658	62182	61470	92338	49991	60918	06677	59292
	87983	52072	64475	41102	92497	25122	80125	05152	07420	48869
	78927	36856	01094	63138	00678	32937	59751	54428	77291	41167
	53946	68643	48595	95051	90250	89605	70743	67380	38851	59623
	15913	35195	18624	96097	15347	64085	61553	01294	55388	44198
7	55067	72386	06936	94420	70489	03106	26216	20547	50108	48813
	69855	70253	13539	38338	64738	45574	70431	15165	39893	11705
	15801	41148	80984	34010	58694	84601	83966	86174	47732	51896
	89488	55573	36744	08408	47509	78611	36994	41760	28698	90331
	21717	65748	44162	84881	39283	58029	85378	13066	06529	05651
8	15154	84055	09578	95332	84556	27557	40383	67845	67280	64634
	54463	13960	71158	09992	84743	96823	18006	97525	24950	06371
	23826	11495	10930	00877	65621	00744	05423	35492	51285	95875
	63684	53793	02391	86640	53806	36634	27465	77396	02411	99095
	94708	31480	34315	85868	15479	47318	44466	26529	63849	53494
9	87824	10694	32841	66565	64488	34454	45043	88393	68043	44986
	72922	68585	44257	22498	08848	38633	26797	85902	48502	08575
	10413	88552	26112	88570	44329	06482	09649	52355	83820	44167

	0	1	2	3	4	5	6	7	8	9
0	00554	75407	14052	45067	54144	60094	62279	81559	32151	15212
	69377	65382	56156	08903	47133	53437	95871	32076	16715	58943
	95810	28614	46543	03341	57063	44658	58138	54583	92097	42524
	40956	11829	01970	30907	51292	85201	59031	18176	68117	38795
	94825	40981	86204	95035	78490	55945	16810	11296	15570	99534
1	69465	78555	86655	37797	55462	37787	23945	41443	22447	90811
	26647	05046	35205	26315	10943	68068	46017	48630	33816	99593
	48628	42940	34125	19945	63802	62333	44996	86130	19360	60657
	40470	90052	77210	03918	69247	85756	93791	03675	59030	56983
	17101	51814	79165	67047	18905	61284	35416	88392	56457	42132
2	19346	91575	42720	00407	55567	18373	68844	68548	06172	23537
	72180	20014	34214	00113	10958	71250	57179	34994	42719	59447
	18398	96215	88152	13295	60097	47966	96555	81951	95769	14317
	39062	02951	20912	40517	28990	90967	72962	16139	78145	56030
	92731	36817	89763	13252	03187	92129	02012	67596	72877	77628
3	75967	75571	36579	49700	02500	97130	53360	62798	84638	52043
	83294	30769	55903	15919	49974	41811	93766	91677	95221	96537
	28017	58779	11704	73402	66837	29576	10336	54595	85199	56894
	74095	47126	17972	19810	33986	65581	91925	81547	59698	63094
	49050	41052	18173	56655	11396	30647	97528	82726	48641	51580
4	03407	40405	39290	98837	92567	06482	23171	76822	09769	20719
	50096	43505	21163	86900	42089	05989	65720	31600	31700	26262
	00631	37566	88966	07945	67665	62484	62524	51682	08888	75724
	94862	70766	65808	26506	15085	13181	68642	47574	46649	98614
	06737	13145	60388	99896	22873	15416	57193	41416	18555	72301
5	09351	06766	21902	37326	04467	04201	09945	89859	56318	62661
	99006	49611	64988	33847	12137	66346	10618	21834	30283	38987
	59904	98453	00036	26207	15236	80673	17441	04577	25580	16102
	60183	62188	84485	41655	20813	17972	29599	67538	36631	57316
	10362	44224	66368	33148	36638	53601	22279	94117	35350	95219
6	75121	67091	28651	40351	02565	78273	09222	41706	15849	55599
	28415	90167	61262	79471	86023	19795	35045	84589	81243	78481
	66129	67056	41875	14588	22223	37955	82616	74268	70889	54499
	37649	96793	03565	56854	12147	66493	37689	40839	77872	81976
	52977	80826	36786	86459	11511	98651	26266	89400	12534	50551
7	94415	36009	07485	07475	72460	32835	27369	97805	78150	01320
	22947	76529	06139	34195	19489	20411	58696	50000	78321	57056
	87357	81833	54146	65723	86126	54042	46643	48063	59893	34970
	22170	45693	66401	41844	35097	51246	20312	87949	66052	45963
	17900	54359	16449	25969	42882	61954	12816	39049	19449	19220
8	86028	51826	90835	69514	40879	41956	85356	42762	56107	03520
	97085	73650	80332	47827	84551	67666	63490	42717	30097	09946
	64652	54663	61974	32901	87654	88474	02182	85635	51341	15197
	02159	10363	37947	99820	16517	62789	77729	84657	94297	80213
	65658	67889	61370	82804	78187	92109	10417	24823	26275	49369
9	69644	90590	22353	17525	45978	13928	17438	79308	10624	59749
	97684	29830	35041	37351	11315	63327	32794	39121	28094	77086
	41673	52740	82384	01333	62400	22755	68548	65449	55161	57706
	44622	31375	48652	06238	85885	03181	25422	08052	58535	61843
	12953	87338	45639	56591	75108	87012	63625	38727	41576	54211

APPENDIX D

Instructions for Taking a Special Sample

D.1 Introduction

This Appendix provides instructions for taking a special sample from a noise zone which was either not sampled for the survey, or for which only a very few clusters were chosen. The special sample selects five clusters from any one noise source.

The data gathered from the special sample is not compatible with the data gathered from the larger sample since it essentially "over-samples" or over-represents the population from one particular noise environment. Therefore, any results from the special sample cannot be integrated into the survey results for the community as a whole. Furthermore, the data analysis provided by the survey program will not include an analysis of the special sample. Therefore, the results will have to be tabulated and analyzed by local administrators and staff.

D.2 Selection of Clusters

The procedure for cluster selection uses the same method described in Section 3.3 of the main text of this manual with a few modifications. Use copies of the same forms required for cluster selection and make the necessary changes.

STEP 1-Re-list Household Information

Make several additional copies of the Cluster Selection Worksheet (Form A). You will need as many pages of the form as were used to do the first listing of blocks in the noise zone. Beginning with the first completed page of Form A for the noise zone, re-list the information in Columns 1 and 3 in the same columns on the blank copies of Form A.

Link undersized blocks exactly as they were linked originally. Split oversized blocks exactly as they were split originally.

STEP 2-Cumulatively Add the MOS

Use Column 4 of the worksheets to calculate the cumulative addition of the MOS for the noise zone. Begin the addition by transferring the "Updated MOS" in Column 3 to Column 4 for the first block only. Then add this number to the "Updated MOS" for the second block and write the sum in Column 4. This is the same procedure that was used previously; however, you are beginning a new start for this noise zone only. The last addition gives the estimated number of households for the noise zone.

STEP 3–Assign the "Estimated MOS Range"

Assign the "Estimated MOS Range" in precisely the same manner described in Section 3.3.1 of the main text. Do this for all the pages of the worksheets for the noise zone.

STEP 4–Calculate the Cluster Sampling Interval

Make additional copies of the Worksheet for Cluster Sampling Interval (Form B). Since only five clusters will be selected, you will need only pages B-1 and B-2. For the "total number of estimated households," use the figure calculated in STEP 2.

Instead of dividing the total MOS by 100, divide by 5 to calculate the sampling interval since there are five selections. Calculate the sampling interval and call it L.

STEP 5–Take a Random Start

Take a random number that is between 1 and L from the Table of Random Numbers (Appendix C). Write this number in the space indicated on Form B.

STEP 6–Select Clusters

Select the five clusters using the systematic method for cluster selection described in Section 3.3.2, STEP 4.

D.3 Listing Households

Print additional copies of the forms required for listing households – Forms D, E and F. Follow the guidelines in Section 3.4 for listing households.

D.4 Household Selection

Print additional copies of Forms H and I for the selected clusters. Follow the guidelines in Section 3.5 for household selection.

D.5 Preparation of Questionnaires

Print additional questionnaires and interviewing materials. Follow the guidelines in Section 3.6 of the main text for preparing questionnaires.

APPENDIX E

Listing Handbook

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Listing Handbook

Your task is to locate and list the addresses of all households in an assigned area (which may consist of a segment of a block, an entire block, or several blocks). A number of these households will be selected for interviewing after all the addresses have been listed. Like all other aspects of conducting a survey, listing must be done thoroughly and precisely to insure scientific reliability. The task requires you to use all available information, clues and indicators to locate all the households in an area. Ultimately, you must use good judgment. But whenever you are uncertain, record the facts and then discuss them with the Field Director.

E.1 MATERIALS

Your packet contains a map, listing forms, sheets for your own sketches of the assigned area, and a letter of identification. The map is to help you locate the block or blocks to be listed. The Listing Form provides a systematic method for listing households. If the map did not provide a reasonably accurate description of the area as you found it, you should provide a sketch so that the interviewer who follows you will have better instructions. The letter of identification describes your job and the agency to which you are responsible, and may be shown to interested residents of the areas you are listing.

E.1.1 Map (Form D)

The map shows the area to be listed. You should not rely entirely on this map to provide a route from your point of departure to the desired block. Instead, you are encouraged to consult a street atlas to locate the block, relative to the nearest major traffic arterials. Your Field Director will assist you.

E.1.2 Lister's Sketch (Form E)

This is the form on which you will sketch the assigned area, providing any useful details for locating the blocks or specific households on the block. You will need to do this in some cases.

E.1.3 Listing Form (Form F)

This is the form on which you will actually list the addresses of the households for each cluster. The first column is for office use only and you must not write in it. The second column tells you the household number assigned to each household that you will list. The number 1 is assigned to the first household located at the 'X' on the map, the spot where you begin to list. Following the arrows on the map, you will continue in an orderly fashion, listing the households in the order you come to them.

E.1.3.1 Street Number

This number should be recorded as it appears on the house, mailbox, curb, or wherever you locate it. Both numerals and letters or fractions are possible (e.g., 1222A, 1222B, 1375-1/2, etc.). If you cannot find the street number, record the household with a short identifying description, such as "house behind 1348."

E.1.3.2 Apartment Number

In some cases, households in multi-family dwellings all share the same street address but are distinguished by different apartment numbers. These can be either numbers or letters (e.g., A, B, 5, 10, 10A, 101, etc.).

E.1.3.3 N/S/E/W

Many streets are designated N/S/E/W (north, south, east, or west) in order to provide the residents with unambiguous addresses. If one of these indicators is present on street signs posted at the given block, include it on the listing.

E.1.3.4 Street Name

Spell the street the way it is spelled on the local posted street signs. If this differs from the census block map or from a street atlas, make note of this fact but use the locally posted version.

E.1.3.5 Ave/St/Dr

Many different streets have the same name but are distinguished by such designations as AVE (avenue), DR (drive), BLVD (boulevard), WY (way), LN (lane), CT (court), etc. If this designation is present on locally posted street signs, include it on the listing.

YOU MUST USE ONE LINE ONLY OF THE LISTING FORM FOR EACH HOUSEHOLD. Abbreviate if necessary.

E.2 DEFINITION OF A HOUSEHOLD

A household is usually defined as a family living together in a housing unit which meets either one of the following criteria:

1. It has complete kitchen facilities for the exclusive use of that household, regardless of whether it is used or not. These facilities must be located in the same building as the other living quarters occupied by the household.
2. It has a separate entrance from the outside or through a common or public hall. The common hall must not be part of any other household's housing unit, but clearly separate from other units in the structure.

A single person living alone in such quarters is also a household. A group of 15 or fewer unrelated individuals living in a common housing unit is considered a household. Larger groups of unrelated individuals living together are not considered as households. Housing units so occupied are called group quarters and are not to be listed.

Unfortunately, the rights of individuals to privacy ordinarily will not permit you to investigate the inside of housing units to determine exactly which households live where. Your task is to infer from all available clues whether a given structure is used as group quarters or as living quarters for one or more households.

Such structures as dormitories, barracks, and patients' accommodations in hospitals are clearly group quarters and are not listed. However, separate living quarters for the staff of such institutions are considered households if they meet either of the household criteria above.

E.3 CLUES, PROBLEMS, AND SOLUTIONS

E.3.1 Find the Assigned Area

The key to finding the block or blocks to be listed is to locate it on the most up-to-date, detailed map of the area available before you leave your point of departure. Your Field Director will assist you. Plan and write out the route you are going to take, being sure to include "alert" indicators such as the names of streets to be encountered that come before the street on which you want to travel.

When you believe that you have arrived at the northwest corner of your assigned block (this corner is marked with an 'X' on your map), take time to drive around the area (if you can), checking street names as you go to be sure you have located the correct area. (Remember that the northwest corner of the block is actually the southeast corner of the intersection.)

While you are driving to be certain of your location, look for problem areas such as houses hidden in the rear, alleys, or anything that may help make your walk around the block more efficient. Drive carefully.

If you are not absolutely certain that you have found the correct area, consult your maps again and call the office for help. It is a waste of effort to list the wrong block.

E.3.1.1 Sketch the Assigned Area

If you discover that the map you were given does not provide a reasonably accurate description of the assigned area, then use Form E to sketch a better map of the area. Also note any details or suggestions, for either finding the block or locating certain households, that will be helpful to the interviewer who will later return to the area to contact respondents for the survey.

E.3.2 Unusual Situations

E.3.2.1 A Block Has No Households

If there have been demolitions in the area, or if for some other reason, you find that there are no households on the block, contact the Field Director and report what you have found.

E.3.2.2 More Blocks Than Expected

Sometimes what appears as one block on a map turns out to be two or more because it contains additional roads or lanes not shown on the map. In all such cases, the area to be listed remains the same as originally defined by the map, regardless of how many city blocks it may now include. If you are not sure, contact your Field Director.

E.3.2.3 Non-existent Streets

Sometimes a street that is shown on a map exists on the map only. Such "paper" roads often can be detected as extensions of existing streets, projected into as-yet-undeveloped areas. Sometimes the gradient of a hillside precludes the existence of the street; however, an open space will usually exist where the street was intended to go. Another clue may be the sudden change in house numbers to the next higher sequence at the 100's position. This is not always associated with a paper road but may be taken as confirmation of other evidence.

If a paper road is given as a block boundary and if you cannot clearly decide where to terminate the listing, make a detailed sketch and phone the Field Director before continuing with the listing.

E.3.3 Proceed Around the Assigned Area

E.3.3.1 Starting Point and Route

In order to assure complete coverage in a listing, a systematic approach is essential. The convention has been adopted that you will start at the northwest corner of the block segment or area to be listed, and proceed in a clockwise direction around the block, with the households to be listed always on your right as you walk along. Continue until the starting point is reached again.

E.3.3.2 Lanes, Alleys, Pathways and Interior Areas

All households found within the block (or block segment) are to be listed, including interior areas. In more urban areas, named lanes, alleys, and courts will be indicated on the block map. If you find additional lanes, alleys, dirt roads, etc., be sure to sketch them on your map (with names where known).

E.3.3.3 Illustrations

Simple Block

Figure E-1 shows a standard listing sequence for a block that includes two cul-de-sacs (i.e., streets that do not cut completely through the block).

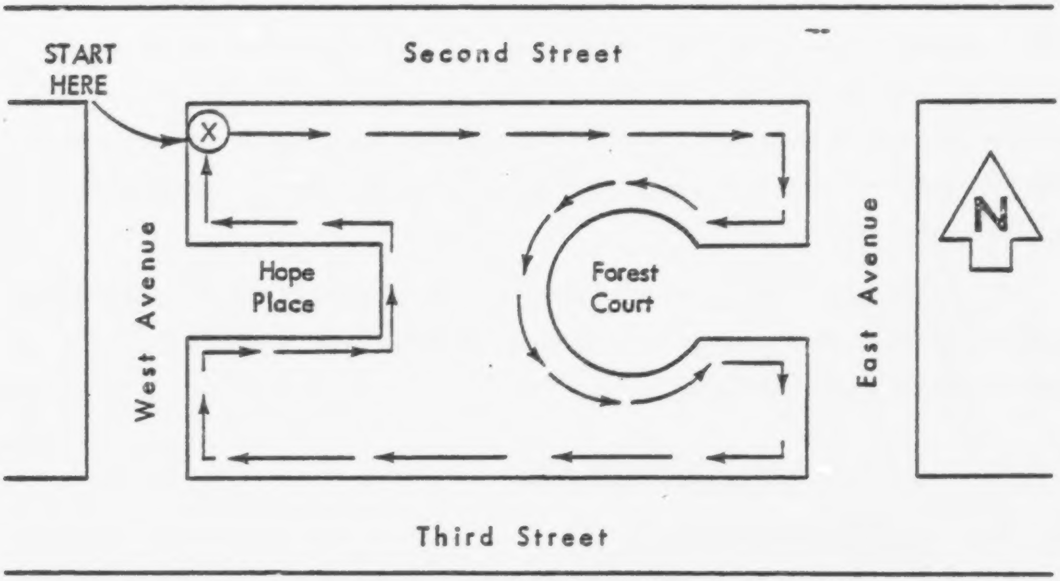
START HERE
Second Street
West Avenue
Hope Place
Forest Court
East Avenue
N
Third Street

Figure E-1. How to Proceed Around a Simple Block

Beginning at point X, proceed clockwise east on Second Street until you come to East Avenue. Turn right and list south on East Avenue. Do not cross Forest Court at East Avenue; instead, turn right and enter Forest Court. Proceed listing around the interior end (cul-de-sac) of Forest Court until you return to East Avenue. Do not cross East Avenue; instead, turn right and continue listing south on East Avenue until you reach the intersection of East Avenue and Third Street. Turn right on Third Street, and continue listing, proceeding west on Third Street, until you reach West Avenue. Turn right on West Avenue, listing north on West Avenue. At Hope Place, do not cross the street; instead, turn right, list to the end of Hope Place, then cross the end of the cul-de-sac and list the rest of Hope Place until West Avenue is reached. Turn right on West Avenue, list north to the corner of Second Street and West Avenue, which is where you started.

Block with an Alley

Figure E-2 shows a listing sequence for a block with an alley.

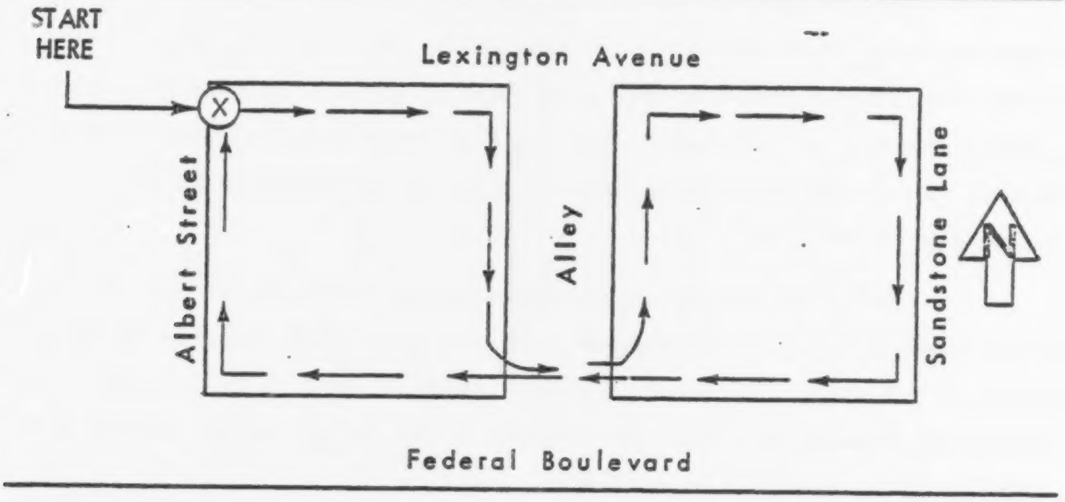

Figure E-2. How to Proceed Around a Block with an Alley

If an unnamed alley or pathway is encountered that cuts all the way through your block, treat it as a cul-de-sac. Enter the alleyway when you first encounter it and locate any households with the main entrance on the alley. Try to determine the actual (mailing) street addresses since they will probably receive mail at some location other than where you first encountered the household. Exit from the alley at the point where you entered it.

If a named street or pathway is encountered that cuts all the way through the block, still treat it as a cul-de-sac or an unnamed alley. Note, however,, that in this case, households will probably have mailing addresses on the new street.

In any case, you should proceed clockwise around the area defined by the original block. The only time a street should be crossed is at the interior end of cul-de-sacs or at the end of streets or alleys that cut through the block so that an exit can be made at the point of entry.

Linked Blocks

When the assigned area includes more than one block, each block or block section should be listed according to the instructions in the handbook. However, all blocks within a cluster should be listed on the same Form F (i.e., on the continuation pages, if necessary) for that cluster. Thus, the first household on the second block is listed on the next line of the Listing Form, directly after the address for the last household on the first block.

Figure E-3 illustrates how to proceed around a linked block when the two or more blocks are adjacent to one another. The blocks will be numbered by the Field Director to indicate the order in which to list. The arrows drawn on the map will indicate the clockwise directions. If you follow the instructions exactly, you will be sure to list all the households in your assigned area.

Figure E-4 illustrates the listing sequence for linked blocks which are not contiguous. You will have to be especially careful to follow the instructions in this case since some whole blocks are not to be listed.

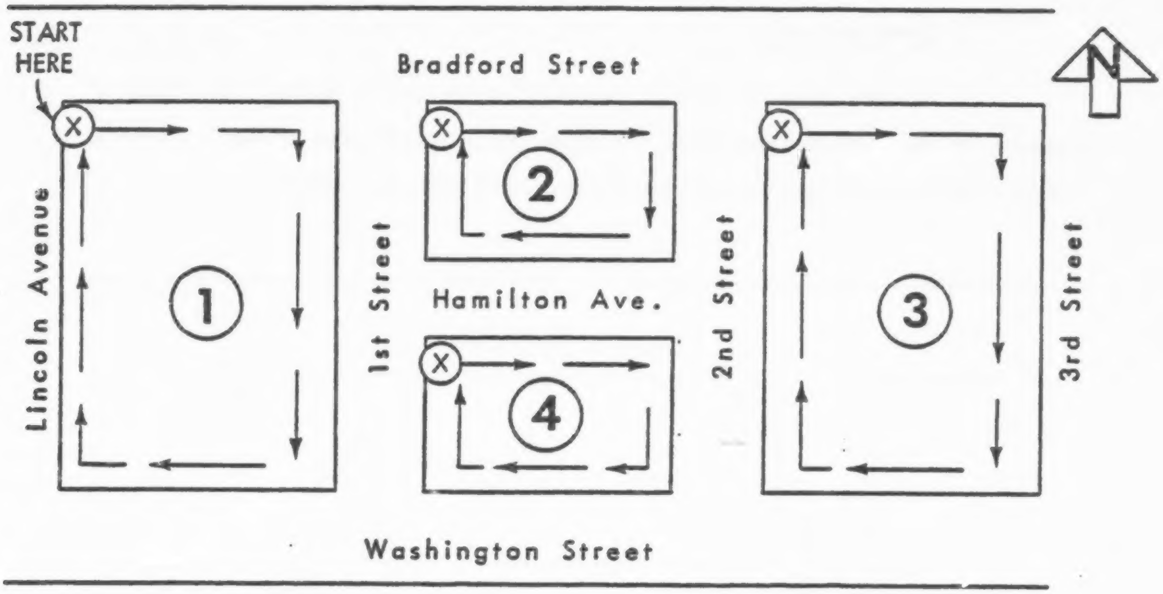
START HERE
Bradford Street
Lincoln Avenue
1st Street
Hamilton Ave.
2nd Street
3rd Street
Washington Street
N
X
1
2
3
4

Figure E-3. How to Proceed Around Contiguous Linked Blocks

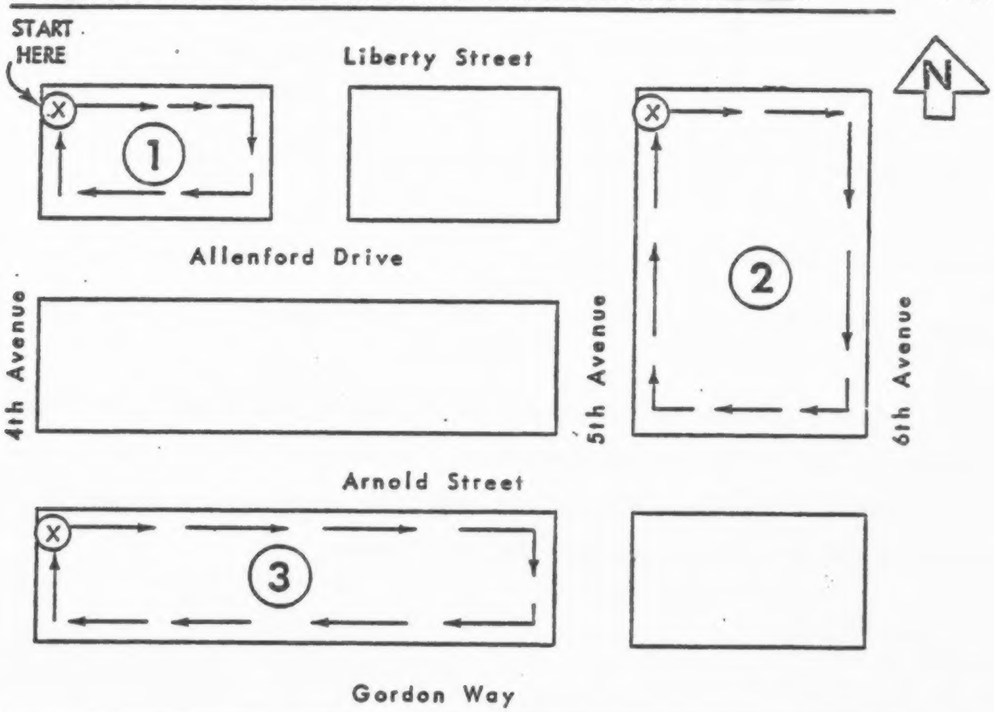
START HERE
Liberty Street
Allenford Drive
4th Avenue
5th Avenue
6th Avenue
Arnold Street
Gordon Way
N
X
1
2
3

Figure E-4. How to Proceed Around Non-Contiguous Linked Blocks

Block Segments

In some cases you will be instructed to list only a segment of a block or segments of one or more blocks and, therefore, include only some of the households. Figure E-5 illustrated how to proceed in the case of a block segment.

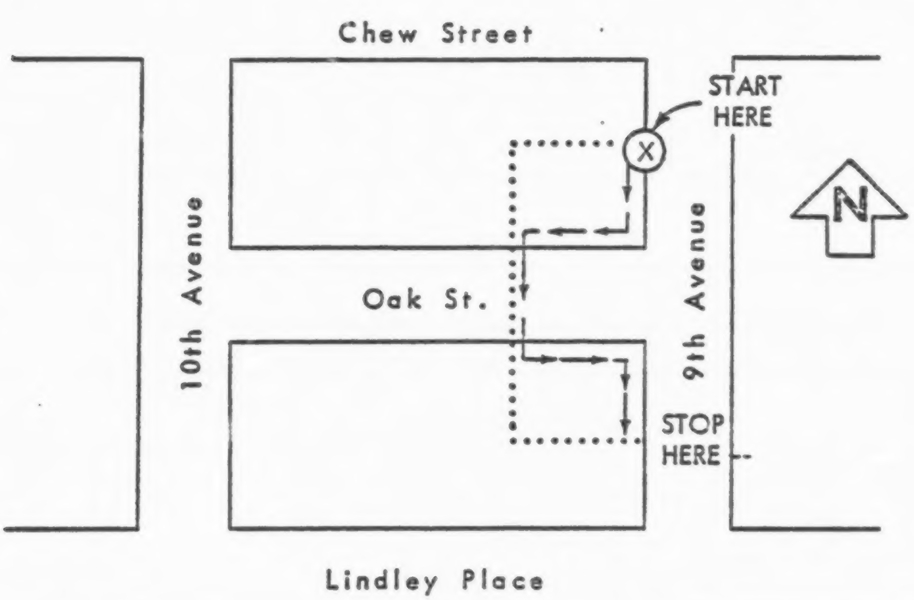
Chew Street
START HERE
X
N
10th Avenue
Oak St.
9th Avenue
STOP HERE
Lindley Place

Figure E-5. How to Proceed Around a Block Segment

Finally, you may be instructed to list an assigned area which could include a combination of any of the previous illustrations. The general instructions will always apply, however, and your map will clearly indicate what households you should list. If you have any doubts, discuss them with the Field Director.

E.3.3.4 Dead Ends, Cliffs, Ravines

You will not always be able to continue clockwise around the block. Many times the street will dead-end or cliffs, a ravine, or another barrier.

If you have followed the guidance given above, this will not come as a surprise but will have been discovered while scouting out the block. In any case, once you have encountered this type of problem, you should try to decide the best way to get around the barrier. You should call your Field Director and request assistance if you feel your proposed solution is in any way doubtful. Otherwise, you should try to locate landmarks on both sides of the barrier so that you will know where to begin listing again on the other side. If there are no prominent features that can be used, you can "post" a sheet of notepaper where you believe it can be seen from the other side, then look for it when you get to the other location.

E.3.4 Identify Households

E.3.4.1 Single Family Dwellings

Single family residences are usually easy to spot. There is one street address, one mailbox, one main entrance, a single electric meter, a single gas meter, one TV antenna, etc. The general character of the neighborhood may tend to confirm the expectation of single family dwellings. In many cases, the housing unit has just what it appears to have – a single household. However, you should be alert to clues that suggest that all is not as it seems. There may be households living in attics, basements, houses in the rear (with entrances off the alley), units over garages, or even garages.

Being able to distinguish between the simple, single family dwelling and the converted (often illegally) informal multi-household unit is the mark of superior listing. Clues to look for include:

1. More than one street address
2. More than one mailbox
3. More than one door bell
4. More than one entrance
5. Two or more electric meters or gas meters
6. Several TV antennas on the roof
7. Too many trash cans (five or more)

If several of these clues are present, you should try to find and list more than one household.

E.3.4.2 Apartments, n-plexes, Flats

Units that were originally designed for multi-family use are usually easy to recognize. Each household has its own mailbox, its own entrance, its own address or apartment. Often there is one additional gas and/or electric meter for a common laundry. Each apartment may have its own labeled trash can. A combination of such clues should let you feel comfortable about listing a specific number of households for each such unit.

It is important that each household (occupied units) in multi-unit structures be listed once and only once. These rules should be followed:

1. If the different units have separate street or house numbers, record them in the order they are encountered when proceeding clockwise around the block.
2. If the different units have apartment numbers or letters, record these in numerical (or alphabetical) order. (Hint: Look at the mailboxes to determine the correct address.)

3. If there are several floors, list from basement to attic.

4. If there are several unnumbered units on a floor, begin at front left as you face the building and list systematically in a clockwise direction. If necessary, draw a rough floor plan to show the location of unnumbered units.

5. Counting mailboxes is often a good way to determine the number of households in an apartment complex. If this method is used, you should determine the exact address of each mailbox. It is unwise to simply note the highest and lowest box number and then subtract. This shortcut can lead to incorrect listing. For example, there often is no apartment 13. Also, large breaks may occur in the sequence of apartment numbers.

6. Consult the apartment manager (if available) if there is a problem not covered by these rules. If there is no one to consult, make notes and inform your Field Director immediately.

E.3.4.3 Manager's Apartment in Motel, Hotel, and Institutions--

Include in the listing managers' apartments in hotels, motels, and institutions, even when other parts of these structures are omitted from the listing under rules discussed below. Also list managers' apartments in residence clubs, custodians' apartments in office buildings, caretakers' cottages at resorts, and staff quarters in institutions when they meet the definition of households. Be sure to provide an adequate description of their location within the structure or on the grounds.

E.3.4.4 Each Unit in Hotels and Motels with Predominantly Nontransient Residents

Structures labeled hotels may have a predominantly transient clientele consisting mostly of persons visiting the area for a short time only. Or it may have a predominantly nontransient clientele consisting mostly of persons who have no usual residence elsewhere. Many small hotels, for example, serve as the usual residence of elderly persons who have no other home.

When you come to a hotel or motel, ask the manager or desk clerk whether they have persons who live there on a regular basis (nontransient or usual residents). List the room numbers of the usual residents.

If the manager resides at the hotel, list him.

E.3.4.5 Trailers in Trailer Courts or Parks Occupied by Nontransients

When you come to a trailer court or park, first determine whether it is intended solely for vacationers and other transients or has nontransient residents. If it is for vacationers and transients only, do not list any trailers in the park other than the manager's, if he lives there. But if any of the trailers are occupied by nontransients, persons with no usual residence elsewhere, list all spaces. As with hotels, ask the manager whether there are certain areas specifically set aside for transients; if so, these areas need not be listed.

Most trailer parks have permanently marked (numbered, lettered, or named) trailer spaces with electricity, water, and sewage facilities. Where these are found, list the nontransient-occupied trailers by their space identification.

E.3.4.6 Trailers Outside Courts or Parks

All residential trailers with permanent foundations or permanent electric, water, and sewage tie-ins are to be listed, if occupied. Trailers which do not meet this criteria are to be listed only if there are signs of present occupancy. Do not list empty trailers being stored for future use or those you may learn are used as extra sleeping space for the occupants of a nearby house.

If a trailer has no separate address, give it the same address as the structure on whose land it is found, but put it on a separate listing line and write an appropriate notation, such as "occupied trailer behind house" or "occupied mobile home parked in driveway."

E.3.4.7 Other Housing Units

List boats, houseboats, tents, railroad cars, and buses set up on blocks if they are occupied as separate living quarters. Do not list them if they are used solely for vacations, for business, or extra sleeping space for the residents of a nearby house or other dwelling. If such boats, vehicles, etc., appear to be occupied on a continuing basis, ask local residents what they are used for. In large marinas, check with the manager to learn if any of the boats are the usual residence of their occupants.

E.3.4.8 Vacant Units

Do not list obviously vacant units.

E.3.4.9 Commercial and Other Structures Whose Primary Use is Nonresidential

Do not assume that a structure that appears to be strictly commercial does not contain households. Look for households above or behind shops and stores; the storekeeper may have his living quarters in such places, or extra space may have been converted into apartments. In churches, private schools, etc., there may be living quarters for janitors or maintenance men. Office buildings may have penthouses for executives at the top. Occasionally, manufacturing or warehouse structures will contain living quarters for watchmen.

E.3.4.10 Security Apartments

These structures often require a key to gain access to those parts of the building that will show how many apartments are present and how they should be listed. If there is an office, guard, or resident manager, identify yourself to the person in charge. Explain what information you want and thank him for his courtesy, even if you are refused the information.

If any doubt remains about the proper way to list such units, try to find the name, address and telephone number of the leasing or sales agency that manages the unit. Your Field Director will attempt to secure their cooperation.

E.3.4.11 Military Bases

Military bases or installations should be treated similarly to security apartments. You should avoid arousing the suspicion of base security personnel by going directly to the main entrance and stating your business to the person on duty.

If you are refused admission, you should withdraw courteously and leave the area immediately. You should not snoop through fences or in any way give the security personnel reason to suspect your behavior. You should report the situation to your Field Director, who will try to secure permission from the base commanding officer.

E.3.5 Odd/Even Numbers Rule

In general, odd numbered addresses are on one side of the street and even numbered addresses are on the other side of the street.

E.3.6 Sequential Numbers Rule

In general, addresses either increase or decrease in order. Having more than one house on a lot may result in local inversions of numbers due to differing front/rear numbering conventions. Major inversions or breaks in address sequence should be cause for careful study before acceptance.

E.3.7 Answering Questions from the Residents

It is not possible for you to be entirely unnoticed by residents of the blocks where you are working. You should try to be as unobtrusive as possible; however, dogs may alert the neighborhood to your presence. Your behavior, especially if you are seen counting trash cans, it likely to be considered suspicious. Some residents may challenge you, asking what you are doing.

Experience suggests that an open, honest response is the best policy, and is also the most ethical way to behave. If a resident passing by happens to ask you what you're doing, you should explain that you work for a research organization (YOUR ORGANIZATION) and that the research is about various community problems. If the resident persists, you may explain that the study is being sponsored by your city, that the results will be used to give valuable information about the community in general to the city administrators, that the results will be made public when analyzed, and that no individuals will be identified by their answers. If appropriate, show the respondent your letter of identification. Remember that you have nothing to hide.

FORM D

IDENTIFYING STREETS AND MAP OF SELECTED CLUSTER

Cluster # ________

Surrounding Streets: ______________________________

____

____

____

Lister ______________________________

Place an 'X' on the most northwest corner and an arrow indicating the clockwise direction.

FORM E

LISTER'S SKETCH OF SELECTED CLUSTER

FORM F-1

HOUSEHOLD LISTING FORM

Cluster # ________

Page 1 of ____

Lister ________________________________

LIST ONLY THOSE HOUSEHOLDS INDICATED BY ARROWS ON THE CLUSTER MAP.

(If an address is unclear, write a good description.)

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					

For Office
Use Only

FORM F-2

HOUSEHOLD LISTING FORM

Cluster # ________

Page 2 of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					

For Office
Use Only

FORM F-3

HOUSEHOLD LISTING FORM

Cluster # ________

Page 3 of ____

Column 1 X	Column 2 Household #	Column 3 Street #	Column 4 Apt. #	Column 5 N/S/E/W	Column 6 Street Name	Column 7 Ave/Street/Drive
	26					
	27					
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					

For Office Use Only ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

APPENDIX F

Questionnaire Materials

- Questionnaire
- Handcards
- Respondent Selection Labels
- Informed Consent Statement
- Example Call-Back Card
- Example Thank You Card

COMMUNITY ENVIRONMENT QUESTIONNAIRE

(Place Respondent Selection Labels Here)

NZ ____
AR ____
CL ____
CTY ____

Address ____
ty/Community ____ Respondent # ____

ill Record Sheet

1st Interviewer ____ ID# ____ # Calls ____
2nd Interviewer ____ ID# ____ # Calls ____

DATE	DAY OF WEEK	TIME	RESULT (CODE EVERY CALL)
1)		am pm	
2)		am pm	
3)		am pm	
4)		am pm	
5)		am pm	

RESULT:

no one home/no answer – 01
respondent not at home – 02
appointment made – 03 – WRITE TIME/DATE
initial contact busy – no appointment – 04
respondent busy – no appointment – 05
initial contact ill – no appointment – 06
respondent ill – no appointment – 07
appt. cancelled by initial contact – 08
appt. cancelled by respondent – 09
non-interview – 82
completed an appointment – 90
completed no appointment – 91

	DATE	INITIAL
LOGGED OUT		
LOGGED IN/TO EDITING		
EDITING COMPLETE		
SELECTED FOR VALIDATION		
VALIDATION COMPLETE		

	DATE	INITIAL
LOGGED BY CODING		
CLOSED-ENDED CODING COMPLETE		
QUALITY CONTROL OF CLOSED-ENDED CODING		
OPEN-ENDED CODING COMPLETE		
QUALITY CONTROL OF OPEN-ENDED CODING		

	DATE	INITIAL
FINAL CHECK		

①

START CARD 1

ID# 1 2 3 4 5 ☐☐☐☐☐

CARD: 6 7 0 1

NZ: 8 9 ☐☐

AR: 10 ☐

CL: 11 12 13 ☐☐☐

CTY: 14 15 16 ☐☐☐

SELECTION LABEL #: 17 18 ☐☐

CALLS: 19 ☐

INTERVIEW DATE: 20 21 ☐☐

①

11 **CONFIDENTIAL**

FOR NON-INTERVIEWS ONLY

FIRST INTERVIEWER

Vacant	01
Address not a dwelling	02
No such address	03
No one at home, final call	04
Respondent not at home, final call	05
Language barrier	06
(What language? ______)	
Secure residence	07
Secure apartment building	08
Manager refuses	09
Initial contact incapable WHY?: ______	10
Initial contact refused WHY?: ______	20
Respondent incapable WHY?: ______	30
Respondent refused VERBATIM: ______	40
Refused to open door COMMENTS: ______	50
Other SPECIFY: ______	60

SECOND INTERVIEWER

E.

Vacant	01
Address not a dwelling	02
No such address	03
No one at home, final call	04
Respondent not at home, final call	05
Language barrier	06
(What language? ______)	
Secure residence	07
Secure apartment building	08
Manager refuses	09
Initial contact incapable WHY?: ______	10
Initial contact refused WHY?: ______	20
Respondent incapable WHY?: ______	30
Respondent refused. VERBATIM: ______	40
Refused to open door COMMENTS: ______	50
Other SPECIFY: ______	60

①

CONFIDENTIAL

FOR NON-INTERVIEWS ONLY

FIRST INTERVIEWER

. **REFUSER**

Black, non-Spanish surname	1
Spanish surname	2
Oriental	3
White, non-Spanish surname (not Oriental)	4
Other	5

SPECIFY: ______________________

. **REFUSER**

Male	1
Female	2

. **AGE ESTIMATE OF REFUSER** ______________

OMMENTS: ______________________

SECOND INTERVIEWER

F. **REFUSER**

Black, non-Spanish surname	1
Spanish surname	2
Oriental	3
White, non-Spanish surname (not Oriental)	4
Other	5

SPECIFY: ______________________

G. **REFUSER**

Male	1
Female	2

H. **AGE ESTIMATE OF REFUSER** ______________

COMMENTS: ______________________

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①

A1. RESPONDENT ID # ______________________________

A2. INTERVIEWER: ______________________________ ID # ______________

DOORSTEP INTRODUCTION (IN YOUR OWN WORDS)

Good Morning/Afternoon/Evening. I'm (........), a representative of (........ YOUR ORGANIZATION). (SHOW IDENTIFICATION)

We're taking a public opinion study in this area concerning the environment and its impact upon the community. Your house has been selected at random from among those around here. By interviewing select individuals, we can be sure we have scientifically represented the attitudes and opinions of the community. The more people who cooperate, the more successful we can be in representing all the people in this city.

I'd like to take a few minutes of your time and ask you a few questions. On the basis of these questions, a respondent will be scientifically selected to be interviewed. The actual interview will then take approximately 20 to 30 minutes. We feel that you will find our questions interesting. Everything you tell us will be strictly confidential. Your name will not be connected in any way with the findings of this very important study. This interview will be combined with others in the sample to give information about the community as a whole.

In this way, valuable information about the environment will be gathered which will help improve the quality of future city planning.

①

ROSTER FOR RESPONDENT SELECTION

I would like to make a list of the persons 18 years or over who live here as permanent members of your household. This will tell me which adult I am to interview.

A3. Starting with the oldest male, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT MALES HAVE BEEN LISTED.)

Now, taking the oldest female, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT FEMALES HAVE BEEN LISTED.)

COMPLETE COLUMNS B-D FOR EACH MENTION. IN COLUMN E, STARTING WITH THE FIRST PERSON LISTED, NUMBER ALL THOSE LISTED IN CONSECUTIVE ORDER (1,2,3,...ETC.). LOOK AT SELECTION TABLE ON FIRST PAGE TO DETERMINE WHICH NUMBER PERSON IS THE RESPONDENT. CIRCLE THE RESPONDENT'S NUMBER IN COLUMN E.

A First Name	B Is this (...)'s Permanent Residence?		C Sex		D Age on Last Birthday	E Number and Circle # Selected
	Yes	No	Male	Female		
1)	1	2	1	2		
2)	1	2	1	2		
3)	1	2	1	2		
4)	1	2	1	2		
5)	1	2	1	2		
6)	1	2	1	2		
7)	1	2	1	2		
8)	1	2	1	2		

IF NOT PERMANENT RESIDENCE, REMOVE (...) FROM ROSTER. RELIST MEMBERS IN ORDER (DO NOT SKIP A LINE NUMBER).

IF NO ONE IS A PERMANENT RESIDENT AT THIS ADDRESS, HOUSEHOLD BECOMES UNQUALIFIED.

TOTAL # ON LIST: 22 ☐

FOR R ONLY

R # ON LIST: 23 ☐

SEX OF R: 24 ☐

AGE OF R: 25 ☐ 26 ☐

END CARD 1

(YOU WILL NOW KNOW WHICH ADULT IN THE HOUSEHOLD YOU ARE TO INTERVIEW. IF THAT PERSON TO BE INTERVIEWED IS THE SAME PERSON AS THE "INITIAL CONTACT" YOU ARE ALREADY TALKING TO, ASK QUESTION A4. IF IT IS NOT THE SAME PERSON, ASK QUESTION A5.)

A4. **In checking my sampling table, I see that you are the person I am supposed to interview in this household.**

GO TO PAGE 1 AND START QUESTION 1.

A5. **In checking my sample table, I see that I must interview (.....), who is (male/female), and who is (AGE). Is (he/she) available now to be interviewed?**

(IF RESPONDENT IS AVAILABLE, MEET THE PERSON AND REPEAT INTRODUCTION ON PAGE iv.) IF NOT AVAILABLE, DETERMINE BEST TIME TO MEET WITH RESPONDENT.

You have been selected from a sampling table to be interviewed.

GO TO PAGE 1 AND START QUESTION 1.

A6. TIME BEGINNING:______________________ AM / PM

1. How long have you lived in this area at your present address or within a few blocks of this address?

ENTER ACTUAL NUMBER OF YEARS, ROUNDED TO NEAREST YEAR (1/2-YEAR OR MORE ROUNDED UP). IF "ALL MY LIFE" OR "LESS THAN 6 MONTHS," CODE BELOW.

RECORD YEARS: ____________

LESS THAN 6 MONTHS	95
ALL MY LIFE (REGARDLESS OF HOW LONG).	90

2. How would you rate the area in which you live? Would you say it was:

Very Good,	5
Good,	4
Fair,	3
Poor, or	2
Very Poor?	1

3. Now, thinking of your area, what three things do you particularly like about this area; that is, within a few blocks of here?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION ____________

2nd MENTION ____________

3rd MENTION ____________

4. What are the three most important problems facing the residents of your area today?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION ____________

2nd MENTION ____________

3rd MENTION ____________

②

START CARD 2

ID#

1	2	3	4	5
☐	☐	☐	☐	☐

	6	7
CARD:	0	2
	8	9
Q1:	☐	☐
	10	
Q2:	☐	

Q3:

	11	12
1st:	☐	☐
	13	14
2nd:	☐	☐
	15	16
3rd:	☐	☐

Q4:

	17	18	19
1st:	☐	☐	☐
	20	21	22
2nd:	☐	☐	☐
	23	24	25
3rd:	☐	☐	☐

②

5. As I read the following list, would you tell me whether any of these are problems here in this area? Please answer "Yes" or "No".

READ (a-h). CIRCLE APPROPRIATE CODE IN COLUMN A.

(We will be using cards to identify your answers to various questions. Each card is numbered at the top right-hand corner. Please do not turn the cards until I tell you to do so.)

FOR EACH "YES" IN COLUMN A, ASK: Please turn to Card #5. How severe a problem is (...)? INSERT EACH PROBLEM WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Would you say that (...) is a Problem?	YES	NO	EXTREMELY SEVERE	QUITE SEVERE	MODERATELY SEVERE	NOT VERY SEVERE	DON'T KNOW
a. Traffic Congestion?	Y	N	5	4	3	2	8
b. Polluted Water?	Y	N	5	4	3	2	8
c. Noise?	Y	N	5	4	3	2	8
d. Crime?	Y	N	5	4	3	2	8
e. Run-Down Areas in Need of Improvement?	Y	N	5	4	3	2	8
f. Unclean Air?	Y	N	5	4	3	2	8
g. Parking?	Y	N	5	4	3	2	8
h. Inadequate Low-Income Housing?	Y	N	5	4	3	2	8

Q5:

a:	26	☐
b:	27	☐
c:	28	☐
d:	29	☐
e:	30	☐
f:	31	☐
g:	32	☐
h:	33	☐

②

6. Please look at card #6. As I read the following, please tell me how you would rate each of the local public services in this area?

READ (a-k). CIRCLE APPROPRIATE CODE.

How Would You Rate:	VERY GOOD	GOOD	FAIR	POOR	VERY POOR	DON'T KNOW/ DOESN'T APPLY
a. Quality of Schools?	5	4	3	2	1	8
b. Police Protection?	5	4	3	2	1	8
c. Fire Protection?	5	4	3	2	1	8
d. Recreation Facilities?	5	4	3	2	1	8
e. Garbage Collection?	5	4	3	2	1	8
f. Hospitals and Health Facilities?	5	4	3	2	1	8
g. Public Transportation?	5	4	3	2	1	8
h. Street Maintenance?	5	4	3	2	1	8
i. Sewage and Drainage?	5	4	3	2	1	8
j. General Pollution Control?	5	4	3	2	1	8
k. Noise Control?	5	4	3	2	1	8

Q6:

a:	34	☐
b:	35	☐
c:	36	☐
d:	37	☐
e:	38	☐
f:	39	☐
g:	40	☐
h:	41	☐
i:	42	☐
j:	43	☐
k:	44	☐

I'd like to ask you a question about your health. This will allow us to better understand your answers to the remaining questions.

7. How would you rate your health overall? Would you say that your health is:

Very Good, ...5
Good, ...4
Average, ...3
Poor, or 2
Very Poor? 1

Q7: 45 ☐

②

Now, in the following questions I will be asking you about the quietness of this area; that is, within a few blocks or so.

. Please turn to card #8. Looking at the card, please tell me how quiet or noisy you consider this area to be?

Q8: 46 ☐

VERY QUIET	4
QUIET	3
NOISY	2
VERY NOISY	1

lease turn to card #9. As you can see at the top of this card, we have defined the word annoyed as eaning: to be disturbed, stressed, or upset by the repeated occurrence of noise. There is then a cale of annoyance, showing the amount of annoyance from Most to Least.

. Now, using this card, please tell me which one of these best describes how annoyed you are by noise in this area?

Q9: 47 ☐

TREMENDOUSLY ANNOYED	1
HIGHLY ANNOYED	2
CONSIDERABLY ANNOYED	3
MEDIUM ANNOYED	4
PARTIALLY ANNOYED.	5
A LITTLE ANNOYED	6
NOT AT ALL ANNOYED	7

②

Does noise interfere with any of the following activities? Please answer "Yes" or "No." READ (a-d). CIRCLE APPROPRIATE CODE IN COLUMN A.

FOR EACH "YES," READ ACTIVITY AND ASK: Please turn to card #10. How often does it interfere with (...)? INSERT EACH ACTIVITY WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Does Noise Interfere with:	YES	NO	ALWAYS INTERFERES	FREQUENTLY INTERFERES	SOMETIMES INTERFERES	RARELY INTERFERES	DON'T KNOW
Sleeping?	Y	N	5	4	3	2	8
Talking or Listening to the Radio, Watching TV, etc?	Y	N	5	4	3	2	8
Reading?	Y	N	5	4	3	2	8
Resting?	Y	N	5	4	3	2	8

Q10:

a: 48 ☐

b: 49 ☐

c: 50 ☐

d: 51 ☐

Please turn to card #11. During which of these time periods does noise annoy you most? CIRCLE ALL MENTIONS.

a.	MORNING (7AM TO NOON)	1
b.	AFTERNOON (NOON TO 6PM)	1
c.	EVENING (6PM TO 10PM)	1
d.	NIGHTTIME (10PM TO 7AM)	1
e.	ALL THE TIME	1
f.	NOISE NEVER ANNOYS ME	1

Q11:

a: 52 ☐

b: 53 ☐

c: 54 ☐

d: 55 ☐

e: 56 ☐

f: 57 ☐

②

2. Generally speaking, do you think noise affects your physical or emotional health and well-being?

YES 3

NO 1

MAYBE 2

3. Does noise affect your health in any of the following ways? Please answer "Yes" or "No." READ (a-e). CIRCLE APPROPRIATE CODE IN COLUMN A.

FOR EACH "YES," READ SYMPTOM AND ASK: Please turn to card #13. How often does noise cause (...)? INSERT EACH SYMPTOM WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Does Noise Cause:	YES	NO	ALL THE TIME	FREQUENTLY	SOMETIMES	RARELY	DON'T KNOW
a. Headaches?	Y	N	5	4	3	2	8
b. Tiredness?	Y	N	5	4	3	2	8
c. Irritability?	Y	N	5	4	3	2	8
d. Hearing Loss or Difficulties?	Y	N	5	4	3	2	8
e. An Existing Health Problem to Get Worse?	Y	N	5	4	3	2	8

. Please turn to card #14. To what extent have you become accustomed to noise?

HIGHLY ACCUSTOMED 5

QUITE ACCUSTOMED 4

MEDIUM ACCUSTOMED 3

NOT VERY ACCUSTOMED 2

NOT AT ALL ACCUSTOMED 1

Q12: 58 ☐

Q13:
a: 59 ☐
b: 60 ☐
c: 61 ☐
d: 62 ☐
e: 63 ☐

Q14: 64 ☐

②

Please turn to card #15. To reduce noise in your home, have you or any member of your household taken any of these actions?

CIRCLE ALL MENTIONS.

a. USE INSULATION OR SOUNDPROOFING 1
b. CLOSE DOORS OR WINDOWS 1
c. TURN-ON OR TURN-UP RADIO, TV, OR STEREO TO MASK NOISE 1
d. WEAR EARPLUGS 1
e. CHANGE LOCATION OF SLEEPING QUARTERS . . . 1
f. CONSIDERED MOVING 1
g. NONE OF THESE 1

Q15:
a: 65 ☐
b: 66 ☐
c: 67 ☐
d: 68 ☐
e: 69 ☐
f: 70 ☐
g: 71 ☐

Please tell me whether you or any member of your household have done any of these things to help reduce noise in this area? Please answer "Yes" or "no."

	YES	NO
a. Complaining to a Neighbor About Making Too Much Noise?	1	0
b. Writing, Telephoning, or Visiting an Official?	1	0
c. Initiating Legal Action?	1	0

Q16:
a: 72 ☐
b: 73 ☐
c: 74 ☐

END CARD 2

Now I'd like to explore some specific noise sources that may or may not annoy you in this area.

17. Please turn to card #17. As I read the following list of noise sources, tell me how annoyed you are by each noise source in this area.

READ (a–u). CIRCLE APPROPRIATE CODE.

How Annoyed are You by Noise from (...)?	TREMENDOUSLY ANNOYED	HIGHLY ANNOYED	CONSIDERABLY ANNOYED	MEDIUM ANNOYED	PARTIALLY ANNOYED	A LITTLE ANNOYED	NOT AT ALL ANNOYED
a. Traffic?	1	2	3	4	5	6	7
b. Motorcycles?	1	2	3	4	5	6	7
c. Trucks?	1	2	3	4	5	6	7
d. Buses?	1	2	3	4	5	6	7
e. Automobiles?	1	2	3	4	5	6	7
f. Highways or Freeways?	1	2	3	4	5	6	7
g. Recreational Vehicles (e.g., Snowmobiles?)	1	2	3	4	5	6	7
h. Garbage Trucks?	1	2	3	4	5	6	7
i. Emergency Vehicles/ Sirens?	1	2	3	4	5	6	7
j. Entertainment Centers (e.g., clubs, movies, places that play live music)?	1	2	3	4	5	6	7
k. Pets/Animals?	1	2	3	4	5	6	7
l. Neighbors' Homes (e.g., noisy stereo, loud talking)?	1	2	3	4	5	6	7
m. Air Conditioners?	1	2	3	4	5	6	7
n. Lawnmowers/ Garden Equipment?	1	2	3	4	5	6	7
o. Jet Airplanes?	1	2	3	4	5	6	7

QUESTION 17 CONTINUES ON NEXT PAGE.

③

START CARD 3

ID#

1 2 3 4 5

☐☐☐ ☐☐

CARD: 6 7

| 0 | 3 |

Q17:

	Column	
a:	8	☐
b:	9	☐
c:	10	☐
d:	11	☐
e:	12	☐
f:	13	☐
g:	14	☐
h:	15	☐
i:	16	☐
j:	17	☐
k:	18	☐
l:	19	☐
m:	20	☐
n:	21	☐
o:	22	☐

③

17. (Continued)

How Annoyed are You by Noise from (...)?	TREMENDOUSLY ANNOYED	HIGHLY ANNOYED	CONSIDERABLY ANNOYED	MEDIUM ANNOYED	PARTIALLY ANNOYED	A LITTLE ANNOYED	NOT AT ALL ANNOYED
p. Small Airplanes?	1	2	3	4	5	6	7
q. Helicopters?	1	2	3	4	5	6	7
r. Trains?	1	2	3	4	5	6	7
s. Construction Noise?	1	2	3	4	5	6	7
t. Commercial or Industrial Equipment?	1	2	3	4	5	6	7

u. What Other Noise Sources Annoy You?

____
First Mention

____
Second Mention

Q17:

p: 23 ☐

q: 24 ☐

r: 25 ☐

s: 26 ☐

t: 27 ☐

u:

1st: 28 29 ☐☐

2nd: 30 31 ☐☐

③

Now I'd like to ask you some questions about reducing noise in this area.

18. Please turn to card #18. Which of the following should be responsible for reducing noise in this area?

CIRCLE ALL MENTIONS.

a. MANUFACTURER	1
b. OPERATOR/OWNER	1
c. LOCAL GOVERNMENT (includes police, local noise control office, any other local administrative office)	1
d. STATE GOVERNMENT	1
e. FEDERAL GOVERNMENT	1
f. NONE	1

19. Do you think this community should have a noise control program to specifically work on reducing noise levels? This program would be funded by the community.

YES . . SKIP TO Q20	2
NO . . ASK Q19A.	1

A. Please turn to card #19. Why do you feel that there should not be a noise control program in this community?

CIRCLE APPROPRIATE CODE.

	MENTIONED	NOT MENTIONED
a. I DON'T THINK ANYTHING CAN BE DONE	1	2
b. I DON'T CARE; I'M NOT BOTHERED ENOUGH	1	2
c. IT IS NOT THE RESPONSIBILITY OF THE COMMUNITY	1	2
d. IT IS TOO COSTLY	1	2

Q18:

32 a: ☐

33 b: ☐

34 c: ☐

35 d: ☐

36 e: ☐

37 f: ☐

38 Q19: ☐

Q19A:

39 a: ☐

40 b: ☐

41 c: ☐

42 d: ☐

(TO PRECEDE Q20):

NOT TO BE INCLUDED IN PRINTED QUESTIONNAIRE

NOTE TO RESEARCHERS: FOR Q20, YOU MUST TYPE THE ACTUAL COST TO YOUR CITY IN THE APPROPRIATE SPACE. FOR a. YOU MULTIPLY $0.10 TIMES THE POPULATION SIZE OF YOUR CITY. FOR b. YOU MULTIPLY $0.25 TIMES THE POPULATION SIZE OF YOUR CITY. FOR c. YOU MULTIPLY $0.50 TIMES THE POPULATION SIZE OF YOUR CITY. FOR d. YOU MULTIPLY $1.00 TIMES THE POPULATION SIZE OF YOUR CITY. FOR e. YOU MULTIPLY $2.50 TIMES THE POPULATION SIZE OF YOUR CITY. FOR f. YOU TAKE THE FIGURE FOR e. AND TYPE IT AFTER "MORE THAN_______."

③

0. Please turn to card #20. Keeping in mind your present level of taxes, how much in additional taxes would you be willing to pay on a yearly basis for a noise control program?

This card shows how much it will cost your city as a whole and how much it will cost each individual in the city.

How much would you be willing to pay in additional taxes for a noise control program?

ADDITIONAL TAXES

COST TO CITY	COST TO INDIVIDUAL	
	(OR APPROXIMATELY 10¢ FOR EACH INDIVIDUAL A YEAR) . .	1
	(OR APPROXIMATELY 25¢ FOR EACH INDIVIDUAL A YEAR) . .	2
	(OR APPROXIMATELY 50¢ FOR EACH INDIVIDUAL A YEAR) . .	3
	(OR APPROXIMATELY $1.00 FOR EACH INDIVIDUAL A YEAR) .	4
	(OR APPROXIMATELY $2.50 FOR EACH INDIVIDUAL A YEAR) .	5
MORE THAN ____________	(OR MORE THAN $2.50 FOR EACH INDIVIDUAL A YEAR) . .	6

I WOULD NOT PAY ANY EXTRA TAXES FOR A NOISE CONTROL PROGRAM 7

Q20:

43 ☐

③

21. If there were a noise control program funded by your community, which of the following suggestions would you support for community noise control? Please answer "Yes" or "No" after each suggestion is described.

READ (a–h). CODE IN APPROPRIATE COLUMN.

Would you support:	YES	NO	DO NOT READ DON'T KNOW
a. Making Noise Sources Quieter – for example, equipment manufacturers would be required to supply quieter products if economically possible.	1	0	8
b. Community Planning and Zoning – for example, industries or highways producing excessive noise would not be allowed to locate near residential areas.	1	0	8
c. Building Codes – for example, new buildings would have to be constructed to reduce interior noise levels.	1	0	8
d. Curfews – for example, work on a construction site would not be permitted in the nighttime or very early morning hours.	1	0	8
e. Fines for Making Too Much Noise – for example, people with automobiles and other vehicles having noisy mufflers would be fined.	1	0	8
f. Barriers – for example, barriers might be installed between a highway and densely-populated areas.	1	0	8
g. Traffic Planning – for example, traffic would be re-routed away from residential areas.	1	0	8
h. Public Information Campaign – for example, a program to inform citizens about noise control would be started.	1	0	8

Q21:

a: 44 ☐

b: 45 ☐

c: 46 ☐

d: 47 ☐

e: 48 ☐

f: 49 ☐

g: 50 ☐

h: 51 ☐

END CARD 3

Now, I'd like to ask you a few final questions about your background.

2. What was the month and year of your birth?

MONTH:________________ YEAR:________________

3. What was the highest grade in school you completed and received credit for? CIRCLE ONE.

00 01 02 03 04 05 06 07 08 09 10 11 12

COLLEGE/OTHER POST HIGH SCHOOL SCHOOLING: 13 14 15 16

POST GRADUATE SCHOOL: 17 18 19 20 OR MORE

4. Have you ever worked?

NO . . . . SKIP TO Q26 80
YES . . . . ASK A. X

A. Please turn to card #24. What is your present employment status?

WORKING FULL-TIME 01
WORKING PART-TIME 02
UNEMPLOYED 03
RETIRED 04
KEEPING HOUSE 05
IN SCHOOL 06
SOMETHING ELSE 07

SPECIFY:____________________________

CONTINUE WITH Q25, Q25A

④

START CARD 4

ID#

1 2 3 4 5

CARD: 6 7 — 0 4

Q22: 8 9

Q23: 10 11

Q24A: 12 13

④

25. What kind of work do (did) you do? What is (was) your main occupation?

(EXAMPLES: ELECTRICAL ENGINEER, SHOE CLERK, JANITOR, TEACHER)

Q25:

Q25A:

14	15

25A. What kind of business, industry, or organization is (was) that in? What do (did) they do or make?

(EXAMPLES: TV MANUFACTURER, RETAIL SHOE STORE, STATE LABOR DEPARTMENT)

Is (was) it wholesale, retail, manufacturing, or what?

④

26. Please turn to card #26. Now, thinking of your entire family, all those related to you in this household, look at the card and tell me the letter of the income group that includes the total income for your family, from all sources, before taxes for last year. Please include your (and your spouse's) income. Do not include unrelated people.

IF UNCERTAIN, ASK: What would be your best guess?

AFTER INITIAL RESPONSE, ASK: Does that include everyone in your family who lives here? Is that before taxes or any deductions?

A.	01
B.	02
C.	03
D.	04
E.	05
F.	06
G.	07
H.	08
I.	09
J.	10
DON'T KNOW	98
REFUSED	99

Q26:

16 17
☐☐

④

27. Please turn to card #27. Tell me which one of these best describes your racial background or heritage?

IF R CHOOSES MORE THAN ONE, PROBE FOR MAIN ONE.

a.	WHITE/ANGLO/EUROPEAN	1
b.	BLACK/NEGRO/AFRO-AMERICAN	2
c.	HISPANIC/LATIN AMERICAN/ SPANISH-PORTUGUESE HERITAGE	3
d.	ASIAN/PACIFIC ISLANDER/ ASIAN-AMERICAN	4
e.	NATIVE AMERICAN/AMERICAN INDIAN/ ALASKAN NATIVE	5
f.	MIDDLE EASTERN/ARAB/NORTH AFRICAN	6
g.	OTHER	7

→ SPECIFY: ______________________________

Q27:

18 ☐

④

28. Please turn to card #28. Do you (or does your family) own this house (apartment)? Do you pay rent, or what?

Q28:

19 ☐

HOUSE OWNED BY ME OR MY FAMILY
(OR BEING BOUGHT NOW) 4

APARTMENT OR CONDOMINIUM OWNED BY ME OR
MY FAMILY (OR BEING BOUGHT NOW) 3

HOUSE OR APARTMENT RENTED 2

NEITHER OWN RESIDENCE NOR PAY RENT 1

29. Including yourself, and including all children, how many people usually live in this house (apartment)?

Q29:

20 21 ☐☐

RECORD #: ____________________

So my supervisor can verify that I completed this interview, please tell me your name and your phone number:

Name: ____

Telephone Number: ____

I would like to thank you on behalf of (NAME OF SPONSORING ORGANIZATION) for taking the trouble to provide us some very valuable information.

****

END OF INTERVIEW

****

A. TIME INTERVIEW ENDED: ____________

B. TIME INTERVIEW BEGAN: ____________
(Refer to page vii)

C. INTERRUPTION: # OF MINUTES: ________

TOTAL # OF MINUTES: ____________
(= A - B - C)

22 23
TIME: ☐☐

CONFIDENTIAL

FILL IN THE FOLLOWING ITEMS
IMMEDIATELY AFTER LEAVING RESPONDENT'S HOME:

B1.	Respondent Was:	Male	1
		Female	2

24
B1: ☐

B2. Building Capacity:

A One-Family House Detached from Any Other House	1
A One-Family House Attached to One or More Houses	2
A Building for Two Families or Duplex	3
A Building for Three or Four Families	4
A Building for Five to Nine Families	5
A Building for 10 to 19 Families	6
A Building for 20 or More Families	7
A Mobile Home or Trailer	8
Other	9

→ SPECIFY: ______________________________

25
B2: ☐

B3. Building Orientation:

Estimate Distance from Dwelling to Street (in feet): __________ Feet

26 27 28
B3: ☐☐☐

B4.	Construction Type:	Masonry	1
		Wood Frame	2

29
B4: ☐

B5.	Sex of Interviewer:	Male	1
		Female	2

30
B5: ☐

B6.	Language of Interview:	English	1
		Spanish	2
		Other	3

→ SPECIFY: ______________________________

31
B6: ☐

END CARD 4

SEVERITY/PROBLEMS ⑤

- EXTREMELY SEVERE
- QUITE SEVERE
- MODERATELY SEVERE
- NOT VERY SEVERE

LOCAL PUBLIC SERVICES

⑥

- VERY GOOD
- GOOD
- FAIR
- POOR
- VERY POOR

QUIET OR NOISY

⑧

- VERY QUIET
- QUIET
- NOISY
- VERY NOISY

⑨

ANNOYED – TO BE DISTURBED, STRESSED OR UPSET BY THE REPEATED OCCURRENCE OF NOISE

- TREMENDOUSLY ANNOYED
- HIGHLY ANNOYED
- CONSIDERABLY ANNOYED
- MEDIUM ANNOYED
- PARTIALLY ANNOYED
- A LITTLE ANNOYED
- NOT AT ALL ANNOYED

⑩

NOISE INTERFERES WITH ACTIVITIES

- ALWAYS INTERFERES
- FREQUENTLY INTERFERES
- SOMETIMES INTERFERES
- RARELY INTERFERES

⑪

TIME PERIODS/NOISE ANNOYS

- MORNING (7 AM - NOON)
- AFTERNOON (NOON - 6 PM)
- EVENING (6 PM - 10 PM)
- NIGHTTIME (10 PM - 7 AM)
- ALL THE TIME
- NOISE NEVER ANNOYS ME

⑬

FREQUENCY/NOISE AFFECTS HEALTH

- ALL THE TIME
- FREQUENTLY
- SOMETIMES
- RARELY

⑭

ACCUSTOMED TO NOISE

- HIGHLY ACCUSTOMED
- QUITE ACCUSTOMED
- MEDIUM ACCUSTOMED
- NOT VERY ACCUSTOMED
- NOT AT ALL ACCUSTOMED

⑮

PERSONAL ACTIONS TAKEN

- USE INSULATION OR SOUNDPROOFING
- CLOSE DOORS OR WINDOWS
- TURN-ON OR TURN-UP RADIO, TV, OR STEREO TO MASK NOISE
- WEAR EARPLUGS
- CHANGE LOCATION OF SLEEPING QUARTERS
- CONSIDERED MOVING
- NONE OF THESE

⑰

ANNOYED – TO BE DISTURBED, STRESSED OR UPSET BY THE REPEATED OCCURRENCE OF NOISE

- TREMENDOUSLY ANNOYED
- HIGHLY ANNOYED
- CONSIDERABLY ANNOYED
- MEDIUM ANNOYED
- PARTIALLY ANNOYED
- A LITTLE ANNOYED
- NOT AT ALL ANNOYED

⑱

RESPONSIBLE/REDUCING NOISE

- MANUFACTURER
- OPERATOR/OWNER
- LOCAL GOVERNMENT (includes police, local noise control office, any other local administrative office)
- STATE GOVERNMENT
- FEDERAL GOVERNMENT
- NONE

⑲

REASONS/NO NOISE CONTROL PROGRAM

- I DON'T THINK THAT ANYTHING CAN BE DONE
- I DON'T CARE; I'M NOT BOTHERED ENOUGH
- IT IS NOT THE RESPONSIBILITY OF THE COMMUNITY
- IT IS TOO COSTLY

NOTE FOR HANDCARD Q20

(Not to be Included with Handcards)

FOR THE HANDCARD FOR Q20, YOU MUST TYPE THE ACTUAL COST TO YOUR CITY IN THE APPROPRIATE SPACE. FOR a, YOU MULTIPLY $0.10 TIMES THE POPULATION SIZE OF YOUR CITY. FOR b, YOU MULTIPLY $0.25 TIMES THE POPULATION SIZE OF YOUR CITY. FOR c, YOU MULTIPLY $0.50 TIMES THE POPULATION SIZE OF YOUR CITY. FOR d, YOU MULTIPLY $1.00 TIMES THE POPULATION SIZE OF YOUR CITY. FOR e, YOU MULTIPLY $2.50 TIMES THE POPULATION SIZE OF YOUR CITY. FOR f, YOU TAKE THE FIGURE FOR e AND TYPE IT AFTER "More than ______."

⑳

ADDITIONAL TAXES FOR NOISE CONTROL PROGRAM

Cost to City	Cost to Individual
●	(or approximately 10¢ for each individual a year)
●	(or approximately 25¢ for each individual a year)
●	(or approximately 50¢ for each individual a year)
●	(or approximately $1.00 for each individual a year)
●	(or approximately $2.50 for each individual a year)
● More than ________	(or more than $2.50 for each individual a year)
● I Would Not Pay Any Extra Taxes for a Noise Control Program.	

㉔

PRESENT EMPLOYMENT STATUS

- WORKING FULL-TIME
- WORKING PART-TIME
- UNEMPLOYED
- RETIRED
- KEEPING HOUSE
- IN SCHOOL
- SOMETHING ELSE? (Please Specify)________________

㉖

FAMILY INCOME LAST YEAR

(BEFORE TAXES)

A.	UNDER $3,000	A YEAR	(or LESS THAN $ 57.69	A WEEK)
B.	$3,000 - $5,999	A YEAR	(or $ 57.70 - $115.37	A WEEK)
C.	$6,000 - $8,999	A YEAR	(or $115.38 - $173.06	A WEEK)
D.	$9,000 - $11,999	A YEAR	(or $173.07 - $230.75	A WEEK)
E.	$12,000 - $14,999	A YEAR	(or $230.76 - $288.44	A WEEK)
F.	$15,000 - $19,999	A YEAR	(or $288.45 - $384.60	A WEEK)
G.	$20,000 - $24,999	A YEAR	(or $384.61 - $480.75	A WEEK)
H.	$25,000 - $29,999	A YEAR	(or $480.76 - $576.90	A WEEK)
I.	$30,000 - $34,999	A YEAR	(or $576.91 - $673.06	A WEEK)
J.	$35,000 AND OVER	A YEAR	(or MORE THAN $673.07	A WEEK)

㉗

RACIAL HERITAGE

- WHITE/ANGLO/EUROPEAN
- BLACK/NEGRO/AFRO-AMERICAN
- HISPANIC/LATIN AMERICAN/SPANISH-PORTUGUESE HERITAGE
- ASIAN/PACIFIC ISLANDER/ASIAN-AMERICAN
- NATIVE AMERICAN/AMERICAN INDIAN/ALASKAN NATIVE
- MIDDLE EASTERN/ARAB/NORTH AFRICAN
- OTHER (Please Specify)________________________________

㉘

RESIDENTIAL SITUATION

- HOUSE OWNED BY ME OR MY FAMILY (or Being Bought Now)
- APARTMENT OR CONDOMINIUM OWNED BY ME OR MY FAMILY (or Being Bought Now)
- HOUSE OR APARTMENT RENTED
- NEITHER OWN RESIDENCE NOR PAY RENT

Respondent Selection Labels

TABLE 01

If the # of Adults is:	1	2	3	4	5	6	or More
Then Select Adult #:	1	1	1	1	1	1	

TABLE 02

If the # of Adults is:	1	2	3	4	5	6	or More
Then Select Adult #:	1	1	1	1	1	1	

TABLE 03

If the # of Adults is:	1	2	3	4	5	6	or More
Then Select Adult #:	1	1	1	1	2	2	

TABLE 04

If the # of Adults is:	1	2	3	4	5	6	or More
Then Select Adult #:	1	1	1	2	2	2	

TABLE 05

If the # of Adults is:	1	2	3	4	5	6	or More
Then Select Adult #:	1	1	2	2	3	3	

TABLE 06

If the # of Adults is:	1	2	3	4	5	6	or More
Then Select Adult #:	1	1	2	2	3	3	

TABLE 07

If the # of Adults is:	1	2	3	4	5	6	or More
Then Select Adult #:	1	2	2	3	4	4	

Respondent Selection Labels

TABLE 08

If the # of Adults is:	1	2	3	4	5	6	or More
Then Select Adult #:	1	2	2	3	4	4	

TABLE 09

If the # of Adults is:	1	2	3	4	5	6	or More
Then Select Adult #:	1	2	3	3	3	5	

TABLE 10

If the # of Adults is:	1	2	3	4	5	6	or More
Then Select Adult #:	1	2	3	4	5	5	

TABLE 11

If the # of Adults is:	1	2	3	4	5	6	or More
Then Select Adult #:	1	2	3	4	5	6	

TABLE 12

If the # of Adults is:	1	2	3	4	5	6	or More
Then Select Adult #:	1	2	3	4	5	6	

This is the proposed form for an "Informed Consent" Authorization for use with the community attitudinal questionnaire.

(to be printed in Duplicate; copy given to Respondent)

(CITY LETTERHEAD)

Respondent I.D. #__________

(CITY NAME) COMMUNITY ENVIRONMENT STUDY

INFORMED CONSENT STATEMENT

The (CITY NAME) Community Environment Survey is a study about people's attitudes and opinions concerning environmental issues facing their local community. It is the goal of this study to provide information to community leaders so they can better plan for the future of this city.

The (CITY NAME) Community Environment Survey consists of a personal interview in your home which will take approximately 20 to 30 minutes.

We are asking that you allow us to include you in this study with the understanding that your participation is voluntary. You may refuse to answer any question or withdraw your consent and discontinue participation in this survey at any time. To indicate your informed consent, we would like you to sign this statement, a copy of which will be left with you.

All information obtained from you will have full protection of confidentiality. Your name will not be associated in any way with the information you give us. This interview will be combined with others in the sample to give information about the community as a whole.

I understand the above and agree to participate in this study.

SIGNATURE:______________________________

DATE:______________________________

INTERVIEWER'S SIGNATURE:______________________________ ID#__________

While you were out........

A (YOUR ORGANIZATION) interviewer called.

The interviewer will visit you again soon.

Your household, along with a few others from this area, has been chosen as part of a sample for a public opinion study we are conducting.

Your name will not be associated with your opinions. When your interview is combined with others in the sample, it will give valuable information about the community environment, and will help improve the quality of life around here.

THE (YOUR ORGANIZATION) INTERVIEWER

- Carries Credentials and Identification
- Will Not Try To Sell You Anything

If you have any questions about our work, please call:

YOUR ORGANIZATION

TELEPHONE NUMBER

Example Call-Back Card

Thank you for this interview!

We deeply appreciate the time, courtesy and cooperation you gave our interviewer. We value highly the thoughts and opinions you expressed on this subject. Your name will not be associated with your opinions. Your questionnaire, combined with others, will add up to a significant cross-section of public opinion.

If you have any questions about our work, please call:

The City
Your Organization
Telephone Number

Example Thank-You Card

APPENDIX G

Interviewer Handbook

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G.1.0 PURPOSE OF THE COMMUNITY NOISE STUDY

This study is aimed at assessing community attitudes toward noise. The purpose is to provide a data base that will give useful feedback to community leaders. Along with physical noise monitoring, the results of this survey will help define the scope of noise problems and the extent of public support for a noise control program.

Approximately 700 households have been sampled to represent the attitudes of residents living within particular noise environments. The opinions of respondents from the sampled households will reflect the attitudes of the community as a whole. One hundred clusters (one or more blocks in which certain households will be contacted) have been selected for the sample. Your job as interviewer will be to go to only the selected households and then interview a selected respondent.

This manual is a practical guide for handling the interview. Section G.2.0 discusses the standards of professional ethics which you should follow. Section G.3.0 discusses the materials you will need. Section G.4.0 discusses your tasks during the household contact and interview. Section G.5.0discusses interviewing procedures, going through the Community Environment Questionnaire page by page. Section G.6.0 discusses good interviewing skills; finally, Section G.7.0 presents two examples of completed questionnaires. Read through the manual several times to become familiar with the guidelines. Also, go over the questionnaire as many times as necessary until you feel completely comfortable with all the sections, questions and instructions. Read the questions out loud several times — words sound different when read aloud. The more thorough your understanding of the questionnaire, the easier you will find the interviewing process and the better your work will be.

G.2.0 STATEMENT OF PROFESSIONAL ETHICS

The activities of interviewers are directed and regulated by a code of professional ethics which has both moral and legal mandates. In agreeing to be interviewed, an individual is disclosing his or her opinions in a public manner. Consequently, the interviewer takes on certain ethical obligations. The rights of respondents as human subjects must be respected.

First, the respondent has a right to have his or her answers kept confidential. No data will be released that would permit any respondent to be identified individually. All information that connects a particular interview with a specific respondent is removed as soon as the interview is received and edited; interviews themselves are identified only by numbers. Therefore, interviewers are expected to maintain confidentiality regarding the respondent's answers and what they hear or observe in the respondent's home.

Second, the respondent's opinions should be treated respectfully and carefully. Accept all answers, being careful not to cast doubt or judgment on the respondent's opinions. Remember that your job is to record answers faithfully and accurately. Do everything possible to make sure that answers have been recorded correctly.

Third, the interviewer should not impose himself or herself on the respondent. The respondent has agreed to an interview, thereby doing the interviewer and the city a favor. The interviewer should in no way take advantage of this situation. Even the mere taking of refreshments (e.g., a cup of coffee) may be a small burden for the respondent.

Fourth, the interviewer has an obligation to maintain a professional role during the course of the interview. The interviewer must not try to provide help or services to the respondent or members of the respondent's family. Respondents may request information or help from interviewers, but this must be resisted. Information or help given "casually" can change a situation of information gathering, imposing a new set of obligations on the interviewer which may be difficult to meet.

G.3.0 INTERVIEWING MATERIALS

You will be assigned to interview households in certain clusters in the city. For each cluster you are assigned, you will be given a Cluster Kit which includes the following materials:

1. An Interviewer's Cluster Map
2. Interviewer Identification
3. Call-Back Cards
4. Questionnaires
5. A Set of Respondent Handcards
6. Informed Consent Statements
7. Thank-You Cards

1. The Interviewer's Cluster Map tells you where the cluster is located in the city. The approximate location of each household that you will contact is marked with an 'X' on the map.

2. The Interviewer Identification letter or card should always be shown to the person who answers the door (the initial contact) and the selected respondent (if he or she is different from the initial contact). This is proof that you are a legitimate representative of the city acting in a professional capacity.

3. Call-Back Cards are to be left at the selected households in case no one is at home.

4. You will have a set of Questionnaires. The number you have will depend on how many households you will contact.

5. The Set of Respondent Handcards are cards which list choices for responses to specific questions and will help the respondent answer quickly and conscientiously.

6. The Informed Consent Statements must be read and signed by every respondent and by you in his or her presence. Each statement is in duplicate so that one copy is given to the respondent and one is brought back to the office.

7. Thank-You Cards should be left at the completion of the interview.

G.4.0 INTERVIEWER TASKS

For each cluster you are assigned, you have certain tasks to complete:

1. Specific Addresses Must be Contacted and Recorded on the Call-Record Sheet.
2. The Selected Respondent Must be Determined.
3. The Selected Respondent Must be Interviewed.
4. The Questionnaire Must be Edited.
5. All the Questionnaires in the Cluster Must be Returned to the Field Director.

1. In each Cluster Kit, you will be given a set of questionnaires with specific addresses. You are to go to those specific addresses, and only those addresses, with each questionnaire. THERE IS TO BE NO SUBSTITUTION OF HOUSEHOLDS. Only in this way will the city be scientifically and correctly represented. Each questionnaire is matched with a particular address and is to be used only at that address. Each time you contact the household, whether or not anyone is home, you must record your call and the result on the first page of the questionnaire – the Call-Record Sheet. This allows for a record of contact attempts as well as giving a procedure for scientifically administering the sample (this will be explained below).

2. After you establish contact with the household (i.e., someone answers the door), you must determine the correct respondent. For each household there is one, and only one, correct respondent and you will use a scientific technique to determine this. You must interview only that person. Again, THERE IS TO BE NO SUBSTITUTION OF RESPONDENTS. This is to ensure that the city as a whole has been adequately represented.

3. After determining the selected respondent, you must interview the selected respondent. You may be able to interview the respondent at your first initial contact, or you may have to make an appointment to see him or her at a more convenient time. Again, each contact call must be recorded on the Call-Record Sheet.

4. After you have finished interviewing the respondent, you must fill out the Observation Sheet on page 18 of the questionnaire and edit the questionnaire carefully. Editing is checking that all information has been adequately gathered, that it is legible and complete, and that no ambiguities remain. After a questionnaire is returned to the office, it will not be possible to correct for any mistakes.

5. You will proceed in the above fashion until all addresses in the cluster are sufficiently contacted (either a completed interview was obtained or a non-interview was obtained, using explicit criteria to be explained). All the questionnaires must then be returned to the Field Director who will log in the questionnaires. You will then be given another cluster assignment and repeat the above procedures.

G.5.0 INTERVIEWING PROCEDURES

The interviewing procedures are now listed, step by step. The procedures are listed by the six parts of the interview:

1. Contacting Households
    - a. The Call-Record Sheet (page i)
    - b. Non-Interviews and Refusals (pp. ii and iii)
2. Determining the Selected Respondent
    - a. The Doorstep Introduction (page v)
    - b. The Selection Roster (page vi)
3. The Informed Consent Statement
4. The Questionnaire
    - a. The Time Beginning and Ending (pp. vii and 18, respectively)
    - b. Questions 1 through 29 (pp. 1 through 17)
5. The Observation Sheet (page 18)
6. Editing the Questionnaire

In reading the questionnaire, a convention is adopted. Where you interact with another person (the initial contact and the selected respondent), WORDS WRITTEN IN UPPER-CASE LETTERS ARE NOT TO BE READ TO THE RESPONDENT. THESE ARE INSTRUCTIONS TO YOU. Words written in lower-case letters are to be read to the respondent.

G.5.1 Contacting Households

You will notice that besides the specific address, each questionnaire has a set of identifying numbers. The respondent identification number is a five-digit number, where the first three digits are the cluster number, and the last two digits are the household number. This number will be written on page i next to the address as well as in the boxes at the top right-hand corner. This number is also called the questionnaire number.

Let's take an example. Suppose you are given cluster number 046. In cluster 046, four households have been selected for interviewing. For instance:

	ADDRESS	QUESTIONNAIRE #/ RESPONDENT ID#
1.	1243 Maple St.	046-01
2.	1532-1/2 5th St.	046-02
3.	1216 Elm St.	046-03
4.	1218 Elm St.	046-04

The map will tell you approximately where each of these households can be found (see Form I). You will go to each of these four addresses and attempt to contact the household. That is, you will use questionnaire 046-01 for 1243 Maple St.; you will use questionnaire 046-02 for 1532-1/2 5th St.; you will use questionnaire 046-03 for 1216 Elm St; and you will use questionnaire 046-04 for 1218 Elm St. You must go to these specific addresses, and only these addresses. Do not substitute another household for these addresses.

FORM I

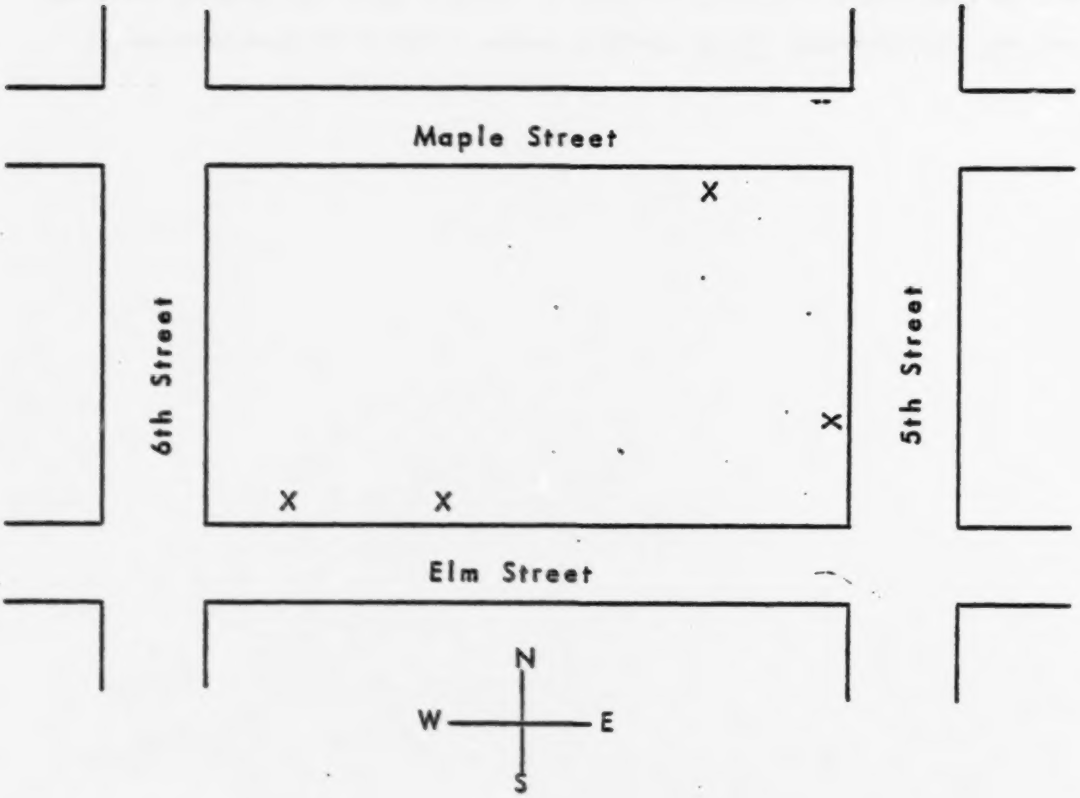
INTERVIEWER'S CLUSTER MAP

Cluster # 046

Surrounding Streets: Maple St.
5th St.
Elm St.
6th St.

Interviewer James Smith ID# 33

The 'X's indicate the approximate locations of the households to contact.


Maple Street
X
6th Street
5th Street
X
X
X
Elm Street
N
W
E
S

G.5.1.1 The Call Record Sheet (Figure G-1)

The first page of the questionnaire is called the Call Record Sheet, and gives the history of each call you make to the selected household. For each call, one line of the Call Record Sheet should be completed. Enter the date, day of week, time, and the result of the call. Under "Result," enter the two-digit code (see the box underneath the Call Record). If the code numbers do not fit the result, record the result verbatim.

If there is no one at home on your first call, you must return again. You must continue calling on these households until you make contact with the household or until five calls have been made. (See Rules for Call-Back.) If, on the fifth attempt, you make contact with the household but the selected respondent is not at home, you must visit once more in order to interview the respondent.

G.5.1.2 Rules for Call-Backs

The rule for repeated call-backs is to vary the times and days when you try to establish contact. For example, if your first call was on a weekday, during the daytime, and no one was at home, you should make your second call in the evening. If that fails, make your third call on the weekend, during the daytime, and so forth. Varying the time and day increases the chances of establishing contact with the household. It is also a good idea to try asking a neighbor about the best time to find someone at home after you have called twice at the address and still cannot locate anyone. Another good idea is to stop back at any address if you are working on that block or in a nearby area; if this stop back is on the same day as an unsuccessful call attempt, do not register the call on the Call Record unless you notice some activity in the household (e.g., the lights are on, someone can be seen, a car has returned). You may also be able to get the telephone number from a Reverse Telephone Directory. Discuss this with the Field Director first, however.

COMMUNITY ENVIRONMENT QUESTIONNAIRE

Figure G-1

(Place Respondent Selection Labels Here)

NZ __________
AR __________
CL __________
CTY __________

Address ____

City/Community ____ Respondent # ________________

Call Record Sheet

1st Interviewer ____________________________ ID# __________ # Calls __________

2nd Interviewer ____________________________ ID# __________ # Calls __________

DATE	DAY OF WEEK	TIME	RESULT (CODE EVERY CALL)
1)		am pm	
2)		am pm	
3)		am pm	
4)		am pm	
5)		am pm	

RESULT:

no one home/no answer – 01
respondent not at home – 02
appointment made – 03 – WRITE TIME/DATE
initial contact busy – no appointment – 04
respondent busy – no appointment – 05
initial contact ill – no appointment – 06
respondent ill – no appointment – 07
appt. cancelled by initial contact – 08
appt. cancelled by respondent – 09
non-interview – 82
completed on appointment – 90
completed no appointment – 91

	DATE	INITIAL		DATE	INITIAL
LOGGED OUT			LOGGED BY CODING		
LOGGED IN/TO EDITING			CLOSED-ENDED CODING COMPLETE		
EDITING COMPLETE			QUALITY CONTROL OF CLOSED-ENDED CODING		
SELECTED FOR VALIDATION			OPEN-ENDED CODING COMPLETE		
VALIDATION COMPLETE			QUALITY CONTROL OF OPEN-ENDED CODING		

	DATE	INITIAL
FINAL CHECK		

G.5.1.3 Non-Interviews

If you do not obtain an interview with the eligible respondent (this is the adult resident who is chosen to be interviewed by using a random selection procedure discussed in Section G.5.2), it is categorized as a non-interview. Non-interviews can occur for several reasons:

1. Failure to make contact with the household after five attempts
2. Failure to make contact with the selected respondent
3. All persons in the household are under 18
4. All persons in the household are not permanent residents
5. A dwelling listed as a household is not a household
6. The selected respondent is incapable of being interviewed
7. The selected respondent refuses to be interviewed

1. If you fail to make contact with the household after five attempts (i.e., no one is at home) and if you followed the criteria of varying the time and day for the contact attempts, then the household is declared a non-interview. Because surveys are expensive, there has to be a limit set on household attempts, otherwise the study is liable to last for months. Five contact attempts is generally considered the most optimal number of attempts. However, it is important that you follow the rules for call-backs (i.e., that you vary the time of the day that you call, and the day of the week).

2. If you make contact with the household, but cannot make contact with the selected respondent, then the household is declared a non-interview. This five call-back rule is a little flexible in this case; if you make contact with the household, for example, only on the fifth attempt, then you should make one additional attempt to contact the selected respondent.

3. If you find that everyone living in the household is under age 18, then the household is declared a non-interview. Only persons age 18 and over can be considered for interviewing. You will obtain the ages of the residents when using the Selection Roster on page vi.

4. If you find that no person in the household is a permanent resident of the city, then the household is declared a non-interview. For example, a house may be rented by a group of people from out-of-town who are using it as a summer resort. Again, this is determined by using the Selection Roster on page vi.

5. If you are given an address, but you find that it is not a residential dwelling, then the household is declared a non-interview (the address may turn out to be an office, for example, instead of a dwelling, or a household may be vacant). In this case, inform the Field Director immediately.

6. If the selected respondent is incapable of being interviewed, then the household is declared a non-interview. For example, the respondent may be too sick to be interviewed.

7. A non-interview is declared if the selected respondent refuses to be interviewed. Why should people refuse to be interviewed, especially when the study is a legitimate one? Unfortunately, there are no standard answers; just as one respondent differs from another, the reasons for refusals are many and varied. Refusals are a source of concern because they introduce bias into the survey findings. You are asked to give as much information as you can about non-response situations, especially refusals. Any personal data on the non-interview respondent — age, sex, marital status, number of children, type of dwelling, etc. — should be recorded on page iii of the questionnaire.

Record the non-interview (Figures G-2 and G-3)

If there is a non-interview for any of the above reasons, carefully record the reasons on page ii of the questionnaire; if the non-interview is a refusal, also carefully fill out page iii. This information will allow the Field Director to assess whether second interview attempts are warranted, and whether any systematic bias is being introduced into the study.

Figure G-2

II **CONFIDENTIAL**

FOR NON-INTERVIEWS ONLY

FIRST INTERVIEWER		SECOND INTERVIEWER	
A.		E.	
Vacant	01	Vacant	01
Address not a dwelling	02	Address not a dwelling	02
No such address	03	No such address	03
No one at home, final call	04	No one at home, final call	04
Respondent not at home, final call	05	Respondent not at home, final call	05
Language barrier	06	Language barrier	06
(What language? ______)		(What language? ______)	
Secure residence	07	Secure residence	07
Secure apartment building	08	Secure apartment building	08
Manager refuses	09	Manager refuses	09
Initial contact incapable	10	Initial contact incapable	10
WHY?: ______ ______		WHY?: ______ ______	
Initial contact refused	20	Initial contact refused	20
WHY?: ______ ______		WHY?: ______ ______	
Respondent incapable	30	Respondent incapable	30
WHY?: ______ ______		WHY?: ______ ______	
Respondent refused	40	Respondent refused	40
VERBATIM: ______ ______		VERBATIM: ______ ______	
Refused to open door	50	Refused to open door	50
COMMENTS: ______ ______		COMMENTS: ______ ______	
Other	60	Other	60
▷ SPECIFY: ______ ______		▷ SPECIFY: ______ ______	

Figure G-3

III

CONFIDENTIAL

FOR NON-INTERVIEWS ONLY

FIRST INTERVIEWER

B. REFUSER

Black, non-Spanish surname . . .	1
Spanish surname	2
Oriental	3
White, non-Spanish surname (not Oriental)	4
Other	5

SPECIFY: ____________________

____

C. REFUSER

Male	1
Female	2

D. AGE ESTIMATE OF REFUSER ____________

COMMENTS: ____________________

____

SECOND INTERVIEWER

F. REFUSER

Black, non-Spanish surname. . .	1
Spanish surname	2
Oriental	3
White, non-Spanish surname (not Oriental)	4
Other	5

SPECIFY: ____________________

____

G. REFUSER

Male	1
Female	2

H. AGE ESTIMATE OF REFUSER ____________

COMMENTS: ____________________

____

G.5.2 Determining the Selected Respondent (Figures G-4 and G-5)

After you have established contact with the household, you will have to determine who the Selected Respondent is. But let's start at the beginning. You knock at the door and someone answers. The person who answers the door may not be the respondent you will want to interview. Yet, you will have to interest this initial contact person sufficiently to allow you to determine the respondent and to be introduced to the respondent. You will have to create this interest in a moment, on the doorstep.

The Doorstep Introduction (Figure G-4)

Page v of the questionnaire presents the essence of a doorstep introduction. You should explain these issues, but put them in your own words. (Incidentally, this is the only place in the interview where you are allowed to use your own words.) You should mention or do the following things in your introduction:

1. Show an identification badge/letter to indicate that you are working in a professional capacity.
2. Explain that a survey is being conducted in the area and that it asks about the environment. (DO NOT mention that the survey is about noise.)
3. Explain that this household has been selected at random in order to accurately represent the views of the community as a whole.
4. Insure that all the information that is given will be kept strictly confidential. Explain that only group results will ever be publicized.
5. Explain that you will ask a few questions to determine who should be interviewed.
6. Indicate that the actual interview will take 20 to 30 minutes.

Naturally, the doorstep is not a very convenient place to carry on a conversation and to establish a friendly relationship. For this reason, doorstep introductions should be brief; sufficient to get you inside the house. You should not ask questions to gain

Figure G-4

v

A1. RESPONDENT ID# ______________________________

A2. INTERVIEWER: ______________________________ ID# ______________

DOORSTEP INTRODUCTION (IN YOUR OWN WORDS)

Good Morning/Afternoon/Evening. I'm (...), a representative of (... YOUR ORGANIZATION). (SHOW IDENTIFICATION)

We're taking a public opinion study in this area concerning the environment and its impact upon the community. Your house has been selected at random from among those around here. By interviewing select individuals, we can be sure we have scientifically represented the attitudes and opinions of the community. The more people who cooperate, the more successful we can be in representing all the people in this city.

I'd like to take a few minutes of your time and ask you a few questions. On the basis of these questions, a respondent will be scientifically selected to be interviewed. The actual interview will then take approximately 20 to 30 minutes. We feel that you will find our questions interesting. Everything you tell us will be strictly confidential. Your name will not be connected in any way with the findings of this very important study. This interview will be combined with others in the sample to give information about the community as a whole.

In this way, valuable information about the environment will be gathered which will help improve the quality of future city planning.

permission for the interview but should suggest the course of action desired. For example, instead of asking "May I come in?" – to which a person could easily say "No" – say "I would like to come in and talk with you about this." Questions which permit negative response can lead a respondent into refusing to be interviewed, or even an initial contact into refusing to give the information you need in order to determine who the respondent will be.

G.5.2.1 The Selection Roster (Figure G-5)

After gaining permission to ask the questions to determine the respondent, you will list all adult members of the household, age 18 and over, who are permanent residents. On page vi, STARTING WITH THE MALES FIRST, you will list all males, age 18 and over, from the oldest through the youngest in descending sequential order. That is, you will list the oldest male first, the next oldest male second, the third oldest male third, and so forth until all adult males have been listed. You usually can list them by writing down their first name in Column A; however, if the initial contact person objects to using names, list them by letter or number, and write a note to that effect on the page. Then, TAKING THE FEMALES, you will list all the females, age 18 and over, starting with the oldest and proceeding through the youngest. You will now have a list of all adult members of the household. Remember, the males are listed before the females and the older members are listed before the younger ones. If two or more members of the same sex have the same age, then it doesn't matter which order you list these particular individuals (but stick with the listed order in making a selection).

Then check whether each listed member lives permanently at the residence (Column B). If the initial contact person asks what is meant by "permanently," say "Is this his or her usual residence? Would he or she say 'This is my permanent residence'?" This way you let the initial contact person decide whether it is a person's permanent residence or not. IF A PERSON DOES NOT LIVE PERMANENTLY IN THAT HOUSEHOLD, YOU MUST REMOVE THEIR NAME FROM THE ROSTER, AND RELIST THE OTHER MEMBERS. Do not merely cross the name out. Erase and relist the members. Once you have listed all

Figure G-5

ROSTER FOR RESPONDENT SELECTION

I would like to make a list of the persons 18 years or over who live here as permanent members of your household. This will tell me which adult I am to interview.

A3. Starting with the oldest male, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT MALES HAVE BEEN LISTED.)

Now, taking the oldest female, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT FEMALES HAVE BEEN LISTED.)

COMPLETE COLUMNS B-D FOR EACH MENTION. IN COLUMN E, STARTING WITH THE FIRST PERSON LISTED, NUMBER ALL THOSE LISTED IN CONSECUTIVE ORDER (1,2,3,...ETC.). LOOK AT SELECTION TABLE ON FIRST PAGE TO DETERMINE WHICH NUMBER PERSON IS THE RESPONDENT. CIRCLE THE RESPONDENT'S NUMBER IN COLUMN E.

A First Name	B Is this (...)'s Permanent Residence?		C Sex		D Age on Last Birthday	E Number and Circle # Selected
	Yes	No	Male	Female		
1)	1	2	1	2		
2)	1	2	1	2		
3)	1	2	1	2		
4)	1	2	1	2		
5)	1	2	1	2		
6)	1	2	1	2		
7)	1	2	1	2		
8)	1	2	1	2		

IF NOT PERMANENT RESIDENCE, REMOVE (...) FROM ROSTER. RELIST MEMBERS IN ORDER (DO NOT SKIP A LINE NUMBER).

IF NO ONE IS A PERMANENT RESIDENT AT THIS ADDRESS, HOUSEHOLD BECOMES UNQUALIFIED.

permanent residents of this household, re-check their sex and ages to be sure that the listed order is correct. Finally, number the individuals on the list in Column E. The numbers should be the same as in Column A, the oldest male is #1, the next oldest is #2, etc., until all the males are numbered; continue numbering the females in order, oldest to youngest.

G.5.2.2 Using the Selection Table

The respondent is selected using the selection table on page i of the questionnaire. Circle the number which is the total number of eligible persons listed on the roster and the number below it. The number on the second line which you have circled is the number of the person to be interviewed. Find the person's name on the list on page vi whose number you have selected, and circle his or her name in Column A and number in Column E. THIS IS THE ADULT IN THE HOUSEHOLD SELECTED FOR INTERVIEW. DO NOT SUBSTITUTE ANY OTHER PERSON.

Figures G-6 through G-9 give examples of rosters and the selection of a respondent. Be sure to study these examples so that you completely understand the procedure. Any mistakes on your part will make the interview ineligible.

Figure G-6

Example Respondent Selection

If the Number of Adults in Household is:	1	2	3	4	[✓ 5]	6	or more
Select Adult Numbered:	1	2	2	3	[✓ 4]	4	

A3. Starting with the oldest male, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT MALES HAVE BEEN LISTED.)

Now, taking the oldest female, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT FEMALES HAVE BEEN LISTED.)

COMPLETE COLUMNS B-D FOR EACH MENTION. IN COLUMN E, STARTING WITH THE FIRST PERSON LISTED, NUMBER ALL THOSE LISTED IN CONSECUTIVE ORDER (1,2,3,...ETC.). LOOK AT SELECTION TABLE ON FIRST PAGE TO DETERMINE WHICH NUMBER PERSON IS THE RESPONDENT. CIRCLE THE RESPONDENT'S NUMBER IN COLUMN E.

A First Name	B Is this (...)'s Permanent Residence?		C Sex		D Age on Last Birthday	E Number and Circle # Selected
	Yes	No	Male	Female		
1) JOHN	[✓ 1]	2	[✓ 1]	2	63	1
2) MARK	[✓ 1]	2	[✓ 1]	2	19	2
3) ELIZABETH	[✓ 1]	2	1	[✓ 2]	58	3
[✓ 4) MARY]	[✓ 1]	2	1	[✓ 2]	24	[✓ 4]
5) CELIA	[✓ 1]	2	1	[✓ 2]	18	5
6)	1	2	1	2		
7)	1	2	1	2		
8)	1	2	1	2		

IF NOT PERMANENT RESIDENCE, REMOVE (...) FROM ROSTER. RELIST MEMBERS IN ORDER (DO NOT SKIP A LINE NUMBER).

IF NO ONE IS A PERMANENT RESIDENT AT THIS ADDRESS, HOUSEHOLD BECOMES UNQUALIFIED.

Figure G-7

Example Respondent Selection

If the Number of Adults in Household is:	1	[✓ 2]	3	4	5	6	or more
Select Adult Numbered:	1	[✓ 2]	2	3	4	4	

A3. Starting with the oldest male, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT MALES HAVE BEEN LISTED.)

Now, taking the oldest female, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT FEMALES HAVE BEEN LISTED.)

COMPLETE COLUMNS B-D FOR EACH MENTION. IN COLUMN E, STARTING WITH THE FIRST PERSON LISTED, NUMBER ALL THOSE LISTED IN CONSECUTIVE ORDER (1,2,3,...ETC.). LOOK AT SELECTION TABLE ON FIRST PAGE TO DETERMINE WHICH NUMBER PERSON IS THE RESPONDENT. CIRCLE THE RESPONDENT'S NUMBER IN COLUMN E.

A First Name	B Is this (...)'s Permanent Residence?		C Sex		D Age on Last Birthday	E Number and Circle # Selected
	Yes	No	Male	Female		
1) Tom	[✓ 1]	2	[✓ 1]	2	28	1
[✓ 2) MARTHA]	[✓ 1]	2	1	[✓ 2]	25	[✓ 2]
3)	1	2	1	2		
4)	1	2	1	2		
5)	1	2	1	2		
6)	1	2	1	2		
7)	1	2	1	2		
8)	1	2	1	2		

IF NOT PERMANENT RESIDENCE, REMOVE (...) FROM ROSTER. RELIST MEMBERS IN ORDER (DO NOT SKIP A LINE NUMBER).

IF NO ONE IS A PERMANENT RESIDENT AT THIS ADDRESS, HOUSEHOLD BECOMES UNQUALIFIED.

Figure G-8

Example Respondent Selection

If the Number of Adults in Household is:	[✓ 1]	2	3	4	5	6	or more
Select Adult Numbered:	[✓ 1]	2	2	3	4	4	

A3. Starting with the oldest male, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT MALES HAVE BEEN LISTED.)

Now, taking the oldest female, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT FEMALES HAVE BEEN LISTED.)

COMPLETE COLUMNS B-D FOR EACH MENTION. IN COLUMN E, STARTING WITH THE FIRST PERSON LISTED, NUMBER ALL THOSE LISTED IN CONSECUTIVE ORDER (1,2,3,...ETC.). LOOK AT SELECTION TABLE ON FIRST PAGE TO DETERMINE WHICH NUMBER PERSON IS THE RESPONDENT. CIRCLE THE RESPONDENT'S NUMBER IN COLUMN E.

A First Name	B Is this (...)'s Permanent Residence?		C Sex		D Age on Last Birthday	E Number and Circle # Selected
	Yes	No	Male	Female		
[✓ 1) Sam]	[✓ 1]	2	[✓ 1]	2	36	[✓ 1]
2)	1	2	1	2		
3)	1	2	1	2		
4)	1	2	1	2		
5)	1	2	1	2		
6)	1	2	1	2		
7)	1	2	1	2		
8)	1	2	1	2		

IF NOT PERMANENT RESIDENCE, REMOVE (...) FROM ROSTER. RELIST MEMBERS IN ORDER (DO NOT SKIP A LINE NUMBER).

IF NO ONE IS A PERMANENT RESIDENT AT THIS ADDRESS, HOUSEHOLD BECOMES UNQUALIFIED.

Figure G-9

Example Respondent Selection

If the Number of Adults in Household is:	1	2	3	[✓ 4]	5	6	or more
Select Adult Numbered:	1	2	2	[✓ 3]	4	4	

A3. Starting with the oldest male, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT MALES HAVE BEEN LISTED.)

Now, taking the oldest female, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT FEMALES HAVE BEEN LISTED.)

COMPLETE COLUMNS B-D FOR EACH MENTION. IN COLUMN E, STARTING WITH THE FIRST PERSON LISTED, NUMBER ALL THOSE LISTED IN CONSECUTIVE ORDER (1,2,3,...ETC.). LOOK AT SELECTION TABLE ON FIRST PAGE TO DETERMINE WHICH NUMBER PERSON IS THE RESPONDENT. CIRCLE THE RESPONDENT'S NUMBER IN COLUMN E.

A First Name	B Is this (...)'s Permanent Residence?		C Sex		D Age on Last Birthday	E Number and Circle # Selected
	Yes	No	Male	Female		
1) PHILLIP	[✓ 1]	2	[✓ 1]	2	64	1
2) CAESAR	[✓ 1]	2	[✓ 1]	2	24	2
[✓ 3) ORLANDO]	[✓ 1]	2	[✓ 1]	2	22	[✓ 3]
4) MARGARITA	[✓ 1]	2	1	[✓ 2]	19	4
5)	1	2	1	2		
6)	1	2	1	2		
7)	1	2	1	2		
8)	1	2	1	2		

IF NOT PERMANENT RESIDENCE, REMOVE (...) FROM ROSTER. RELIST MEMBERS IN ORDER (DO NOT SKIP A LINE NUMBER).

IF NO ONE IS A PERMANENT RESIDENT AT THIS ADDRESS, HOUSEHOLD BECOMES UNQUALIFIED.

G.5.2.4 Contacting the Respondent (Figure G-10)

You will now be able to contact the selected respondent. If the initial contact person is the respondent, then you will probably be able to continue the interview at this time. If the respondent is not the initial contact person but is at home, you can also try to obtain the interview at this time. If the respondent is not the initial contact person and is also not at home, try to make an appointment to return to see him or her, or at least to telephone to arrange an appointment. Leave a Call-Back card at the household with your name and telephone number on it.

If the selected respondent is not at home, briefly explain your visit to the initial contact in the household who can tell you when the respondent will be at home. It is, of course, a good plan to establish friendly relations with this intermediary since his attitude can help or hinder you in making contact with the proper respondent. Sometimes it helps to explain briefly why you cannot interview someone other than the prescribed respondent. ("We scientifically choose addresses and also select the respondent. This enables us to talk to men and women of different ages and different walks of life.")

After establishing contact with the respondent, you should assume the respondent is not too busy and should approach him or her as though the interview were going to take place then, at the time of first contact. By all means, make arrangements to return at a more convenient time if the respondent suggests this, but accept this situation at the respondent's initiative. Suggest it yourself only as a last resort when you want to leave the door open for another try at a time when the respondent might be more willing to be interviewed.

If the respondent asks how much time will be required for the interview, tell him or her that the usual length is between 20 minutes and 30 minutes. Do not say that the interview will take only a few minutes.

If other persons are present, suggest to the respondent before beginning the interview that he or she might prefer to talk to you in a more private place. Even though a respondent might refuse to be interviewed under these circumstances, the presence of outsiders might cause a reluctance to talk about certain things.

Figure G-10

(YOU WILL NOW KNOW WHICH ADULT IN THE HOUSEHOLD YOU ARE TO INTERVIEW. IF THAT PERSON TO BE INTERVIEWED IS THE SAME PERSON AS THE "INITIAL CONTACT" YOU ARE ALREADY TALKING TO, ASK QUESTION A4. IF IT IS NOT THE SAME PERSON, ASK QUESTION A5.)

A4. In checking my sampling table, I see that you are the person I am supposed to interview in this household.

GO TO PAGE 1 AND START QUESTION 1.

A5. In checking my sample table, I see that I must interview (.....), who is (male/female), and who is (AGE). Is (he/she) available now to be interviewed?

(IF RESPONDENT IS AVAILABLE, MEET THE PERSON AND REPEAT INTRODUCTION ON PAGE iv.) IF NOT AVAILABLE, DETERMINE BEST TIME TO MEET WITH RESPONDENT.

You have been selected from a sampling table to be interviewed.

GO TO PAGE 1 AND START QUESTION 1.

A6. TIME BEGINNING:______________________ AM / PM.

G.5.2.5 Answering Questions

It is important that the respondent understand he or she is part of a "cross-section" survey, and that he or she was chosen quite impersonally only because he or she happens to be a particular person at a particular address. You may say something like this: "You see, in trying to find out what people think, we don't talk with everyone; but we try to talk to men and women of different ages and in all walks of life. We start by selecting certain blocks from all over the city. In each of these blocks, we select specific addresses. Then when the interviews from all these addresses are combined, we have a cross-section of the people."

Most people will go through an interview without asking you any questions; some will ask for information during the introduction, or after you've started the interview. However, you should always be ready with an answer. Listen to the respondent and answer only what he has asked.

Some of the questions respondents ask are:

"How did you happen to pick me?"
"Who gave you our name?"
"I don't know enough about this. Why don't you go next door?"
"What's all this about, anyway?"
"Why are you doing this survey?"

You should have ready and convincing answers to questions like these. The detailed instructions and your conferences with your Field Director will provide the information to answer these questions.

G.5.3 The Informed Consent Statement (Figure G-11)

When the respondent agrees to be interviewed, have him or her sign the Informed Consent Statement before you start the interview. The Informed Consent Statement states that the respondent understands why he or she is being interviewed and indicates that participation is being given voluntarily.

(CITY LETTERHEAD)

Respondent I.D. # __________

(CITY NAME) COMMUNITY ENVIRONMENT STUDY

INFORMED CONSENT STATEMENT

The (CITY NAME) Community Environment Survey is a study about people's attitudes and opinions concerning environmental issues facing their local community. It is the goal of this study to provide information to community leaders so they can better plan for the future of this city.

The (CITY NAME) Community Environment Survey consists of a personal interview in your home which will take approximately 20 to 30 minutes.

We are asking that you allow us to include you in this study with the understanding that your participation is voluntary. You may refuse to answer any question or withdraw your consent and discontinue participation in this survey at any time. To indicate your informed consent, we would like you to sign this statement, a copy of which will be left with you.

All information obtained from you will have full protection of confidentiality. Your name will not be associated in any way with the information you give us. This interview will be combined with others in the sample to give information about the community as a whole.

I understand the above and agree to participate in this study.

SIGNATURE: ______________________________

DATE: ______________________________

INTERVIEWER'S SIGNATURE: ______________________________ ID# __________

Figure G-11. Example Informed Consent Statement

There are two Informed Consent Statements to be signed – one for the Field Director and one to be left with the respondent. Be sure that you also sign the statement and write your interviewer ID number and the Respondent ID number on the form.

G.5.4 The Questionnaire

You are now ready to start the interview proper. At the time you begin the interview (that is, you are ready to ask Q1), record the time that the interview began on page vii (whether you have continued the interview after completing the Selection Roster or have had to come back at another time). When you finish the interview (i.e., when you complete Q29), be sure to write the time at which it ended on page 18, and the number of minutes of interruptions there were, if any.

G.5.4.1 Rules on the Mechanics of Recording

In order to insure a uniform procedure for recording interviews, these procedures are followed.

Record Responses During the Interview

Experience has shown that the most accurate way to reproduce the responses is to record them immediately, as the respondent is talking. Have your pencil ready to record. For the write-in questions especially, relevant information and distortions can occur if you try to remember later what was said. For these write-in questions, when the respondent starts to talk, begin to write immediately.

Writing Must be Legible

Regardless of how good the actual interview may have been, it is worthless if the record of it cannot be read.

Use a Pencil to Record

Please use a black lead #2 pencil to record the answers. NEVER USE A PEN. Carry several pencils with you when taking an interview so you will always have a sharp one.

Do Not Write in the Right-Hand Margin

Do not write in the right-hand margin. This area (with the boxes in it) is for the coding process. If you need to add any comments, write them to the left of the question.

G.5.4.2 Types of Recorded Responses

There are two basic types of questions in the questionnaire. These are the Open-Ended (or write-in) questions and the Closed-Ended (or pre-coded) questions.

The Open-Ended Questions

For four of the questions, you will have to write-in an answer. These questions are Q3, Q4, Q25, and Q25A. For example, Q3 asks the respondent:

3. Now, thinking of your area, what three things do you particularly like about this area; that is, within a few blocks of here?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION __________________________

2nd MENTION __________________________

3rd MENTION __________________________

In this case, all respondents will give open answers (that is, answers in their own words) and you will have to record what they say VERBATIM. You must learn to record the respondent's replies in the very words the respondent uses. This is what is called VERBATIM REPORTING. Catch the phrases, grammatical usage, tricks and peculiarities of speech characteristics of each respondent so that the answer will reflect something of his or her individual personality. DO NOT summarize or paraphrase the respondent's answers. Summarizing or paraphrasing a response creates an artificial – and dangerous step between the respondent and the analyst since it often results in distortion. A summarized response obscures the respondent's own answer. Consider the difference between the following two examples of recorded responses to Q3.

Verbatim Recording	Summarized Recording
I like the natural environment around here - the trees, the landscape, the parks. It makes living here more pleasant.	The parks are pleasant.

The summarized recording lacks the true intensity and lustre of the respondent's reply. The problem is even more serious as the paraphrased answer actually distorts the meaning of the respondent's reply. Be sure that you write down exactly what the respondent says for the open-ended questions.

The Closed-Ended Questions

The remainder of the questions are closed-ended (or pre-coded). In this type of question, you simply circle the appropriate answer or answers. Each closed-ended question has its own pre-coded numerical system. For example, Q8 asks:

8. Please turn to card #8. Looking at the card, please tell me how quiet or noisy you consider this area to be?

VERY QUIET	4
QUIET	3
NOISY	2
VERY NOISY	1

If the respondent says "Very Quiet," then you circle the 4; if he or she says "Quiet," you circle the 3, and so forth. Also, for this question, you will be using Respondent Handcards explained in the section for Question 5, page

Some closed-ended questions may have more than one chosen response. For example, Q18 asks:

18. Please turn to card #18. Which of the following should be responsible for reducing noise in this area?

CIRCLE ALL MENTIONS.

a. MANUFACTURER	1
b. OPERATOR/OWNER	1
c. LOCAL GOVERNMENT (INCLUDES POLICE, LOCAL NOISE CONTROL OFFICE, ANY OTHER LOCAL ADMINISTRATIVE OFFICE)	1
d. STATE GOVERNMENT	1
e. FEDERAL GOVERNMENT	1
f. NONE	1

The respondent may choose none of these; one, two, three, or even four of these. For example, if the respondent says "Manufacturer," you circle only the 1 attached to a. If the respondent also says "State Government," you circle both the 1 attached to a. and the 1 attached to d. and so on. If the respondent says "None," you circle only the 1 attached to f.

G.5.4.3 The Questions of the Questionnaire

Now, let's go through the questionnaire, question by question.

Many questions use the phrase "this area." This phrase refers to the present address or within a few blocks of the present address. If the respondent asks what is meant by "this area," say "Around here or within a few blocks of here." Let the respondent decide how wide a geographical area is meant by this.

1. How long have you lived in this area at your present address or within a few blocks of this address?

ENTER ACTUAL NUMBER OF YEARS, ROUNDED TO NEAREST YEAR (1/2-YEAR OR MORE ROUNDED UP). IF "ALL MY LIFE" OR "LESS THAN 6 MONTHS," CODE BELOW.

RECORD YEARS:________________.

LESS THAN 6 MONTHS	.95
ALL MY LIFE (REGARDLESS OF HOW LONG).	.90

Read this question in a smooth voice, but emphasize the underlined words: long and area. This emphasis will help the respondent grasp the key concepts in the question. The respondent may give the amount of time lived in the area or can answer "All My Life," or words to that effect. If the respondent answers with the amount of time, record the number of years to the nearest year (1/2-year or more rounded up). If it applies, there is a separate answer for "Less than 6 Months" (or words to that effect). Circle '95' in this case. If the respondent answers "All My Life" (or words to that effect), circle '90'.

2. How would you rate the area you live in? Would you say it was:

Very Good, ...	.5
Good, ...	.4
Fair,.	.3
Poor, or	.2
Very Poor?	.1

In reading this question, read each possible response in a smooth and equal tone of voice ("Very Good," "Good," "Fair," "Poor," or "Very Poor."). Do not drop your voice at the end of the choices. Circle the appropriate code.

3. Now, thinking of your area, what three things do you particularly like about this area; that is, within a few blocks of here?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION ____________________

2nd MENTION ____________________

3rd MENTION ____________________

Read the question smoothly, emphasizing the underlined words: three and like. The respondent will tell you the things about the area that he or she particularly likes. Record the items VERBATIM. There is space for three mentions, but accept fewer if the respondent mentions only one or two. The question indicates that you should PROBE FOR THREE MENTIONS. This means that you should try to get the respondent to give three mentions. For example, if the respondent doesn't give any or gives only one or two, say something like, "Are there any other things you particularly like about this area? Even little ones?" Probing for three mentions means that you try to get three mentions from the respondent. It does not mean that you should give examples. DO NOT GIVE EXAMPLES OR SUGGEST THINGS. Write the exact words used for probing in the left-hand margin. After probing for three mentions, if the respondent cannot give three, go on to the next question. If the respondent mentions more than three, list them in order, using the back of the page if necessary. Record any comments by the respondent VERBATIM.

4. What are the three most important problems facing the residents of your area today?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION ____________________

2nd MENTION ____________________

3rd MENTION ____________________

Question 4 (Continued)

Again, emphasize the underlined words in reading the question: three and problems. The respondent will tell you the problems facing the residents of the area as he or she sees them. Record the items VERBATIM. If the respondent asks what a 'problem' is, say "Something that bothers the residents of your area." As with Q3, probe for three mentions. Again, DO NOT GIVE EXAMPLES OR SUGGEST THINGS. Write the exact words used for probing in the left-hand margin. If the respondent mentions more than three, list them in order, using the back of the page if necessary.

5. As I read the following list, would you tell me whether any of these are problems here in this area? Please answer "Yes" or "No".

READ (a-h). CIRCLE APPROPRIATE CODE IN COLUMN A.

(We will be using cards to identify your answers to various questions. Each card is numbered at the top right-hand corner. Please do not turn the cards until I tell you to do so.)

FOR EACH "YES" IN COLUMN A, ASK: Please turn to Card #5. How severe a problem is (...)? INSERT EACH PROBLEM WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Would you say that (...) is a Problem?	YES	NO	EXTREMELY SEVERE	QUITE SEVERE	MODERATELY SEVERE --	NOT VERY SEVERE	DON'T KNOW
a. Traffic Congestion?	Y	N	5	4	3	2	8
b. Polluted Water?	Y	N	5	4	3	2	8
c. Noise?	Y	N	5	4	3	2	8
d. Crime?	Y	N	5	4	3	2	8
e. Run-Down Areas in Need of Improvement?	Y	N	5	4	3	2	8
f. Unclean Air?	Y	N	5	4	3	2	8
g. Parking?	Y	N	5	4	3	2	8
h. Inadequate Low-Income Housing?	Y	N	5	4	3	2	8

Question 5 introduced both the A-B type questions and the respondent handcards. Let's discuss these in turn.

Question 5 (Continued)

The A-B Type Questions

There are three A-B type questions (Q5, Q10, Q13). In an A-B type question, you read all the items in Column A before you read Column B. For example, in Q5, after reading the initial questions ("As I read the .... "), you would then say:

> "Would you say that Traffic Congestion is a problem?" (Respondent answers "Yes" or "No")
> "Would you say that Polluted Water is a problem?" (Respondent answers "Yes" or "No")
> "Would you say that Noise is a problem?" (Respondent answers "Yes" or "No")
> "Would you say that Crime is a problem?" (Respondent answers "Yes" or "No")
> "Would you say that Run-Down Areas in Need of Improvement is a problem?" (Respondent answers "Yes" or "No")
> "Would you say that Unclean Air is a problem?" (Respondent answers "Yes" or "No")
> "Would you say that Parking is a problem?" (Respondent answers "Yes" or "No")
> "Would you say that Inadequate Low-Income Housing is a problem?" (Respondent answers "Yes" or "No")

In other words, you must read each and every item, one by one, prefacing your remarks with: "Would you say that (...) is a problem?" inserting each item listed for (...) as you read. While this may sound repetitious, it is the only way of standardizing the questions for the respondent. If you started to abbreviate your questions, then the respondent might simplify his or her answers (e.g., "Just put me down for 'No' for all these."). Therefore, be patient and simply read the list through, item by item, carefully. Be sure not to add any inflection in your voice that might indicate that one item is more or less important than any other.

After Column A has been read entirely, then you read through Column B if there are any "Yes" answers in Column A. This requires you to introduce the handcards; how to do this is explained below. Column B is read for only those items for which "Yes" was answered in Column A. For example, in the above example (Q5), if the respondent answers "Yes" to Traffic Congestion, Noise, and Parking, you would ask:

Question 5 (Continued)

"Please turn to Card #5. How severe a problem is Traffic Congestion?"

(Respondent gives answer from Card #5).

"How severe a problem is Noise?" (Respondent gives answer from Card #5).

"How severe a problem is Parking?" (Respondent gives answer from Card #5).

You do not read items for which the respondent answered "No" in Column A. So, for each "Yes" answer in Column A, you must read the item for Column B, prefacing the item with "How severe a problem is (...)?", again, inserting the appropriate item for (...).

Use of Respondent Handcards

You will be using respondent handcards to help the respondent frame his or her answers to questions. The cards list possible responses to some of the questions.

If the respondent gives any "Yes" answers to Column A in Question 5, you will introduce the handcards before you ask Column B. If the respondent has not answered "Yes" to any items in Column A, you will introduce the handcards before you ask Question 6.

Hand the deck of cards to the respondent and explain that the cards are for various questions and that they give a list of choices. The respondent will choose which on the list fits closest to the way he or she feels. Tell the respondent not to turn the cards until told to do so. When you get to a question for which cards are used, you will tell the respondent to turn to the appropriate card (the cards are numbered in the right-hand corner according to the question number), e.g., Card #5 for Question 5; Card #15 for Question 15; Card #26 for Question 26, and so forth.

Proper use of the cards is an important part of your job as an interviewer, so please observe the following guidelines:

1. Always have the cards with you when you go out into the field.
2. Check that the respondent is looking at the appropriate card for the question you are asking. Cards are numbered by their question number.
3. Never paraphrase or alter what is on the card.
4. Be sure that the respondent does not look through the cards before you tell him or her to do so.
5. If the respondent is illiterate or has difficulty in reading, tactfully suggest that you read the alternatives to him or her. Note this on your questionnaire after you leave the respondent's home.

6. Please look at card #6. As I read the following, please tell me how you would rate each of the local public services in this area?

How Would You Rate:	VERY GOOD	GOOD	FAIR	POOR	VERY POOR	DON'T KNOW/ DOESN'T APPLY
a. Quality of Schools?	5	4	3	2	1	8
b. Police Protection?	5	4	3	2	1	8
c. Fire Protection?	5	4	3	2	1	8
d. Recreation Facilities?	5	4	3	2	1	8
e. Garbage Collection?	5	4	3	2	1	8
f. Hospitals and Health Facilities?	5	4	3	2	1	8
g. Public Transportation?	5	4	3	2	1	8
h. Street Maintenance?	5	4	3	2	1	8
i. Sewage and Drainage?	5	4	3	2	1	8
j. General Pollution Control?	5	4	3	2	1	8
k. Noise Control?	5	4	3	2	1	8

If you haven't introduced the respondent handcards in Q5, you must introduce them now. Be sure you understand how to use them. Read the question and then, for each item on the list, repeat "How would you rate (...)?" and then read an item on the list. For each item, circle the code for the response on the appropriate line.

In case the respondent asks, the following definitions are to be used:

1. Schools - "Grammar schools and secondary schools but not colleges or universities."

Question 6 (Continued)

2. Recreation Facilities - "Parks, playgrounds, sports facilities, fairgrounds, music facilities, movie theaters, art facilities, and any entertainment facility."

3. Hospitals and Health Facilities - "This includes all services for health care, such as hospitals, doctors' offices, clinics and so on, and all personnel such as doctors, nurses, paramedics, technicians and other health personnel."

4. Public Transportation - "Buses, streetcars, subways, trains or other means of transportation which is run by the local authority."

5. General Pollution Control - "Any protection of the environment by the local authority. This would include control over air pollution, water pollution, excessive noise levels or, if it applies, control over excessive pesticides, or the protection of fishing grounds."

7. How would you rate your health overall? Would you say that your health is:

Very Good,	5
Good,	4
Average,	3
Poor, or	2
Very Poor?	1

Introduce the question by reading the preceding remark: "I'd like to ask you a question about your health. This will allow us to better understand your answers to the remaining questions." This prepares the respondent for the question and indicates that there is to be a change in the content of questions. You will notice that throughout the questionnaire, whenever there are changes in the content, there will be preceding remarks designed to prepare the respondent to "switch gears" and think about the topic to be discussed.

Read each response slowly and circle the appropriate code.

8. Please turn to card #8. Looking at the card, please tell me how quiet or noisy you consider this area to be?

VERY QUIET	4
QUIET	3
NOISY	2
VERY NOISY	1

Again, introduce the change in topic by reading the preceding remark: "Now, in the following questions I will be asking you about the quietness of this area; that is, within a few blocks or so."

Be sure the respondent has turned to card #8. Do not read the responses on the handcard unless the respondent becomes confused. Circle the appropriate code. If the respondent cannot make up his or her mind, say, "In general, what would this area be?" "In general" or "generally speaking" are phrases you can use when it is necessary to repeat a question.

Please turn to card #9. As you can see at the top of this card, we have defined the word annoyed as meaning: to be disturbed, stressed, or upset by the repeated occurrence of noise. There is then a scale of annoyance, showing the amount of annoyance from Most to Least.

9. Now, using this card, please tell me which one of these best describes how annoyed you are by noise in this area?

TREMENDOUSLY ANNOYED	1
HIGHLY ANNOYED	2
CONSIDERABLY ANNOYED	3
MEDIUM ANNOYED	4
PARTIALLY ANNOYED	5
A LITTLE ANNOYED	6
NOT AT ALL ANNOYED	7

Question 9 (Continued)

It is important that you read the definition of annoyance slowly. You should then check to be sure that the respondent understands the definition before asking the question. You can generally check this by looking directly at the respondent and watching his or her eyes to see if they comprehend. Then, ask the question, emphasizing the underlined words: one, annoyed, and this.

If the respondent does not understand the idea of a scale, say "Not At All Annoyed is the least amount of annoyance, and Tremendously Annoyed is the most amount of annoyance; think of the answers in-between as steps of a ladder, from lowest to highest." Circle the appropriate code.

10. Does noise interfere with any of the following activities? Please answer "Yes" or "No."

	A		B				
Does Noise Interfere with:	YES	NO	ALWAYS INTERFERES	FREQUENTLY INTERFERES	SOMETIMES INTERFERES	RARELY INTERFERES	DON'T KNOW
a. Sleeping?	Y	N	5	4	3	2	8
b. Talking or Listening to the Radio, Watching TV, etc?	Y	N	5	4	3	2	8
c. Reading?	Y	N	5	4	3	2	8
d. Resting?	Y	N	5	4	3	2	8

This is an A-B type question. Be sure to read all the items in Column A before reading any of the items in Column B. Preface each items with "Does Noise Interfere With (...)?" In Column B, read only those items for which there was a "Yes" response in Column A. For example, if the respondent answers "Yes" only for "Sleeping?", then Column B is asked only for "Sleeping?" Do not read the responses on card #10 unless the respondent does not understand them. Circle the appropriate code.

11. Please turn to card #11. During which of these time periods does noise annoy you most?

a.	MORNING (7AM TO NOON)	1
b.	AFTERNOON (NOON TO 6PM)	1
c.	EVENING (6PM TO 10PM)	1
d.	NIGHTTIME (10PM TO 7AM)	1
e.	ALL THE TIME	1
f.	NOISE NEVER ANNOYS ME	1

Read this question emphasizing the underlined words: noise annoy. The respondent may mention more than one of these. For each mention, circle the appropriate code(s). If the respondent mentions each time period - one by one (e.g., the respondent says "Morning," "Afternoon," "Evening," and "Nighttime," ask: "Do you mean 'ALL THE TIME'?" Circle "ALL THE TIME" if respondent agrees; otherwise, leave the separate items circled. If the respondent does not mention anything, ask: "Does noise ever annoy you?" If respondent says "No," then circle "NOISE NEVER ANNOYS ME."

12. Generally speaking, do you think noise affects your physical or emotional health and well-being?

YES	3
NO	1
MAYBE	2

If the respondent says "Yes" or "Noise affects my health" or "Noise makes me very nervous," etc., circle the code for "YES." If the respondent answers "No," circle the code for "NO." If the respondent cannot make up his or her mind, or thinks it might be true, circle the code for "MAYBE."

13. Does noise affect your health in any of the following ways? Please answer "Yes" or "No."

	A		B				
Does Noise Cause:	YES	NO	ALL THE TIME	FREQUENTLY	SOMETIMES	RARELY	DON'T KNOW
a. Headaches?	Y	N	5	4	3	2	8
b. Tiredness?	Y	N	5	4	3	2	8
c. Irritability?	Y	N	5	4	3	2	8
d. Hearing Loss or Difficulties?	Y	N	5	4	3	2	8
e. An Existing Health Problem to Get Worse?	Y	N	5	4	3	2	8

This is an A-B type question. Be sure to read all the items in Column A before reading any of the items in Column B. Preface each item with: "Does Noise Cause (...)?" In Column B, read only those items for which there was a "Yes" response in Column A. For example, if the respondent answered "Yes" to "Tiredness?" and "Irritability?", then Column B is asked only for these two items - "How often does noise cause Tiredness?" and "How often does noise cause Irritability?"

14. Please turn to card #14. To what extent have you become accustomed to noise?

HIGHLY ACCUSTOMED	5
QUITE ACCUSTOMED	4
MEDIUM ACCUSTOMED	3
NOT VERY ACCUSTOMED	2
NOT AT ALL ACCUSTOMED	1

Read the question, emphasizing the underlined word: accustomed. Do not read the responses on the card. Circle the appropriate code.

15. Please turn to card #15. To reduce noise in your home, have you or any member of your household taken any of these actions?

a. USE INSULATION OR SOUNDPROOFING	1
b. CLOSE DOORS OR WINDOWS	1
c. TURN-ON OR TURN-UP RADIO, TV, OR STEREO TO MASK NOISE	1
d. WEAR EARPLUGS	1
e. CHANGE LOCATION OF SLEEPING QUARTERS . .	1
f. CONSIDERED MOVING	1
g. NONE OF THESE	1

Read the question, emphasizing the underlined words: reduce and actions. The respondent may mention more than one of these. For each mention, circle the appropriate code(s). If the respondent does not mention anything, ask: "Have you taken any of these actions?" If respondent says "No," circle "NONE OF THESE." DO NOT give examples.

16. Please tell me whether you or any member of your household have done any of these things to help reduce noise in this area? Please answer "Yes" or "No."

	YES	NO
a. Complaining to a Neighbor About Making Too Much Noise?	1	0
b. Writing, Telephoning, or Visiting an Official?	1	0
c. Initiating Legal Action?	1	0

Read the first part of the question, emphasizing the underlined word: area. Then read each of these items, one by one, obtaining a "Yes" or "No" answer after each. Circle the appropriate codes for each item.

Now I'd like to explore some specific noise sources that may or may not annoy you in this area.

17. Please turn to card #17. As I read the following list of noise sources, tell me how annoyed you are by each noise source in this area.

How Annoyed are You by Noise from (...)?	TREMENDOUSLY ANNOYED	HIGHLY ANNOYED	CONSIDERABLY ANNOYED	MEDIUM ANNOYED	PARTIALLY ANNOYED	A LITTLE ANNOYED	NOT AT ALL ANNOYED
a. Traffic?	1	2	3	4	5	6	7
b. Motorcycles?	1	2	3	4	5	6	7
c. Trucks?	1	2	3	4	5	6	7
d. Buses?	1	2	3	4	5	6	7
e. Automobiles?	1	2	3	4	5	6	7
f. Highways or Freeways?	1	2	3	4	5	6	7
g. Recreational Vehicles (e.g., Snowmobiles?)	1	2	3	4	5	6	7
h. Garbage Trucks?	1	2	3	4	5	6	7
i. Emergency Vehicles/ Sirens?	1	2	3	4	5	6	7
j. Entertainment Centers (e.g., clubs, movies, places that play live music)?	1	2	3	4	5	6	7
k. Pets/Animals?	1	2	3	4	5	6	7
l. Neighbors' Homes (e.g., noisy stereo, loud talking)?	1	2	3	4	5	6	7
m. Air Conditioners?	1	2	3	4	5	6	7
n. Lawnmowers/ Garden Equipment?	1	2	3	4	5	6	7
o. Jet Airplanes?	1	2	3	4	5	6	7

QUESTION 17 CONTINUES ON NEXT PAGE.

Question 17 (Continued)

How Annoyed are You by Noise from (...)?	TREMENDOUSLY ANNOYED	HIGHLY ANNOYED	CONSIDERABLY ANNOYED	MEDIUM ANNOYED	PARTIALLY ANNOYED	A LITTLE ANNOYED	NOT AT ALL ANNOYED
p. Small Airplanes?	1	2	3	4	5	6	7
q. Helicopters?	1	2	3	4	5	6	7
r. Trains?	1	2	3	4	5	6	7
s. Construction Noise?	1	2	3	4	5	6	7
t. Commercial or Industrial Equipment?	1	2	3	4	5	6	7

u. What Other Noise Sources Annoy You?

____
First Mention

____
Second Mention

Question 17 is a long and somewhat complicated question. First read the introduction to the respondent: "Now I'd like to explore some specific noise sources that may or may not annoy you in this area." Then read the main question, making sure that the respondent has turned to card #17. Then taking each item at a time, read: "How annoyed are you by noise from (...)?" Insert each item listed for (...). For each of the items, circle the appropriate code.

For the first few items, you should read the question slowly, possible even reading the seven responses - "Are you 'Tremendously Annoyed', 'Highly Annoyed', 'Considerably Annoyed', 'Medium Annoyed', 'Partially Annoyed', 'A Little Annoyed', or 'Not At All Annoyed' by Traffic?" (Note: If you read any of the responses, you must read all of them so as not to bias the respondent.) After the respondent has got the idea of the question, you can speed up.

Question 17 (Continued)

Remember, Question 17 continues on the next page. After you have completed the list up to t, ask u: "What other noise sources annoy you?" Write down any and all mentions VERBATIM, even if the respondent mentions more than two. If the respondent does not mention any other sources, write "NONE" in the space so that the editors and coders will know that you asked the question. This is important.

Now I'd like to ask you some questions about reducing noise in this area.

18. Please turn to card #18. Which of the following should be responsible for reducing noise in this area?

a.	MANUFACTURER	.1
b.	OPERATOR/OWNER	.1
c.	LOCAL GOVERNMENT (INCLUDES POLICE, LOCAL NOISE CONTROL OFFICE, ANY OTHER LOCAL ADMINISTRATIVE OFFICE) . . .	.1
d.	STATE GOVERNMENT	.1
e.	FEDERAL GOVERNMENT	.1
f.	NONE	.1

Read the question, emphasizing the underlined words: reducing (in the introduction), responsible and reducing (in the body of the question). The respondent may mention more than one of these. For each mention, circle the appropriate code(s). If the respondent does not mention anything, ask "Should any of these be responsible for reducing noise in this area?" If the respondent says "No," circle "NONE." DO NOT give examples.

19. Do you think this community should have a noise control program to specifically work on reducing noise levels? This program would be funded by the community.

YES . . SKIP TO Q20. 2
NO . . ASK Q19A 1

Read the question, emphasizing the underlined words: noise control program and reducing noise levels. Be sure, also, that the second part of the question — "This program would be funded by the community" is clearly stated. Circle the appropriate code. If the respondent answers "YES," skip to question 20. If the respondent answers "NO," ask question 19A. Remember, Q19A is asked only if the respondent answers "NO" in Q19.

19A. Please turn to card #19. Why do you feel that there should not be a noise control program in this community?

	MENTIONED	NOT MENTIONED
a. I DON'T THINK ANYTHING CAN BE DONE	1	2
b. I DON' CARE; I'M NOT BOTHERED ENOUGH	1	2
c. IT IS NOT THE RESPONSIBILITY OF THE COMMUNITY	1	2
d. IT IS TOO COSTLY	1	2

Do not read the responses on the handcard, but circle each code in the MENTIONED column. For each response that the respondent does not mention, circle the appropriate code in the NOT MENTIONED column. For example, if the respondent mentions "d. It is too costly," circle 1 for d and 2 for a, b, and c. Or if the respondent mentions "a. I don't think anything can be done," circle 1 for a and 2 for b, c, and d. The respondent may mention more than one of these. If the respondent mentions something else, write it down and circle all NOT MENTIONED codes.

20. Please turn to card #20. Keeping in mind your present level of taxes, how much in additional taxes would you be willing to pay on a yearly basis for a noise control program?

This card shows how much it will cost your city as a whole and how much it will cost each individual in the city.

How much would you be willing to pay in additional taxes for a noise control program?

ADDITIONAL TAXES

	COST TO CITY	COST TO INDIVIDUAL	
a.		(or approximately 10¢ for each individual a year)	1
b.		(or approximately 25¢ for each individual a year)	2
c.		(or approximately 50¢ for each individual a year)	3
d.		(or approximately \$1.00 for each individual a year)	4
e.		(or approximately \$2.50 for each individual a year)	5
f.	More than \$______	(or more than \$2.50 for each individual a year)	6
g.	I would not pay any extra taxes for a noise control program		7

Question 20 can be a tricky question. The respondent is being asked how much in additional taxes he or she would be willing to pay for a noise control program in a year. On the questionnaire you will receive (unlike this example), the amounts will be presented in two ways: (1) the cost for the city as a whole - listed under the heading COST TO CITY, and (2) the cost to each individual in the city - listed under the heading COST TO INDIVIDUAL. The cost for the city as a whole has been calculated by multiplying the COST TO INDIVIDUAL (i.e., the per capita cost) by the size of your city. For example, the COST TO CITY for a is equal to 10¢ times the population of the city; the COST TO CITY for b is equal to 25¢ times the population of the city; the COST TO CITY for c is equal to 50¢ times the population of the city, and so forth.

If the respondent asks, you can explain it this way:

Question 20 (Continued)

"The cost to the city is the cost for each individual times the number of people who live in our city for each year. For example, for a, if you are willing to pay 10¢ a year for each individual in the city, this will cost the city as a whole (INSERT TOTAL COST FOR a) because 10¢ times (POPULATION SIZE OF CITY) persons is equal to (. ______). If you are willing to pay 25¢ a year for each individual in the city, this will cost (INSERT TOTAL COST FOR b). If you are willing to pay 50¢ a year for each individual in the city, this will cost (INSERT TOTAL COST FOR c). If you are willing to pay $1.00 a year for each individual in the city, this will cost (INSERT TOTAL COST FOR d). If you are willing to pay $2.50 a year for each individual in the city, this will cost (INSERT TOTAL COST FOR e). If you are willing to pay more than $2.50 a year for each individual in the city, this will cost more than (INSERT TOTAL COST FOR E). Or maybe you are not willing to pay anything at all."

21. If there were a noise control program funded by your community, which of the following suggestions would you support for community noise control? Please answer "Yes" or "No" after each suggestion is described.

Would you support:	YES	NO	DO NOT READ DON'T KNOW
a. Making Noise Sources Quieter – for example, equipment manufacturers would be required to supply quieter products if economically possible.	1	0	8
b. Community Planning and Zoning – for example, industries or highways producing excessive noise would not be allowed to locate near residential areas.	1	0	8
c. Building Codes – for example, new buildings would have to be constructed to reduce interior noise levels.	1	0	8
d. Curfews – for example, work on a construction site would not be permitted in the nighttime or very early morning hours.	1	0	8
e. Fines for Making Too Much Noise – for example, people with automobiles and other vehicles having noisy mufflers would be fined.	1	0	8
f. Barriers – for example, barriers might be installed between a highway and densely-populated areas.	1	0	8
g. Traffic Planning – for example, traffic would be re-routed away from residential areas.	1	0	8
h. Public Information Campaign – for example, a program to inform citizens about noise control would be started.	1	0	8

Question 21 (Continued)

Read the main question. Then read each item slowly, prefacing each one by "Would you support (...)?" Emphasize the underlined words and hesitate slightly before reading the example. In this way, the respondent will know what is being asked. For instance, in a, you will ask (after reading the main question): "Would you support Making Noise Sources Quieter (HESITATE). For example, equipment manufacturers would be required to supply quieter products if economically possible."

For each item on the list, circle code 1 for "YES" and 0 for "NO." If the respondent asks how the program would be funded, say "The Program would be funded by the community." If the respondent asks how much the program would cost, say "I don't know, but it would cost something."

22. What was the month and year of your birth?

MONTH:____________ YEAR:____________

Record the month and year of the respondent's birth.

23. What was the highest grade in school you completed and received credit for?

	00	01	02	03	04	05	06	07	08	09	10	11	12
COLLEGE/OTHER POST HIGH SCHOOL:										13	14	15	16
POST GRADUATE SCHOOL:							17	18	19	20	OR MORE		

Read the question emphasizing the underlined words: you completed. Circle the highest grade in school that the individual completed. After the respondent has given an answer, ask: "Did you complete that grade?" If the respondent says "NO," then ask: "Did you complete (THE PREVIOUS GRADE)?" Ask in this way until you are sure of the highest grade completed by the respondent.

Question 23 (Continued)

If the respondent was educated in another country's educational system, ask:

1. "What country was that in?"
2. "What level of schooling was that?"
3. "How many years of education had you completed by then?"
4. "What age were you when you finished?"

Be sure to write the answers to these questions down verbatim. Coders will determine how to handle this later.

If the respondent indicates that he or she has attended college for more than 8 years, circle "OR MORE." If the respondent replies that he or she has a B.A. or an M.A. degree, ask: "How many years of college have you had?" DO NOT ASSUME that a B.A. degree automatically takes 4 years.

24. Have you ever worked?

NO . . SKIP TO Q26 80
YES . . ASK A X

In this question, the emphasis is on having ever worked. The answer should be "Yes" or "No." If the respondent answers "Yes," ask Q24A. If the respondent answers "No" (i.e., he or she has never worked), then SKIP TO Q26.

24A. Please turn to card #24. What is your present employment status?

WORKING FULL-TIME	01
WORKING PART-TIME	02
UNEMPLOYED	03
RETIRED	04
KEEPING HOUSE	05
IN SCHOOL	06
SOMETHING ELSE	07

SPECIFY:__________________________

Read the question, emphasizing the underlined work - present. Do not read the responses, but be prepared to explain some of the categories. Circle the appropriate code.

1. WORKING FULL-TIME is defined as working 32 hours or more a week now.
2. WORKING PART-TIME is defined as working less than 32 hours a week now.
3. UNEMPLOYED is defined as having once worked, presently not working, but looking for work.
4. RETIRED is defined as having left the labor force after a certain age and living on a retirement income of some sort.
5. KEEPING HOUSE is defined as taking care of a house not for pay (e.g., being a housewife; raising children; living with someone; unpaid domestic duties).
6. IN SCHOOL is defined as spending full-time studying in an educational institute. It does not involve working to support oneself (for which Working Full-Time or Working Part-Time would apply).
7. SOMETHING ELSE is defined as anything which does not fit into the above categories. Examples would be: In the Armed Services; Disabled; Living on Inheritance; Living on Stocks; Rental Income, etc.

Question 24A (Continued)

If the respondent indicates "SOMETHING ELSE," check to see that the response is really different from the other categories by asking "Is that different from any of these?" Record the respondent's answer verbatim in this case. Also, record your question in the left margin.

If a respondent cannot decide between two or more of the categories, or if the respondent gives two or more, the category highest on the list (i.e., having the lowest code number) takes priority. For example, if a respondent says that he or she is RETIRED but is also WORKING PART-TIME, then WORKING PART-TIME should be circled.

25. What kind of work do (did) you do? What is (was) your main occupation?

(EXAMPLES: ELECTRICAL ENGINEER, SHOE CLERK, JANITOR, TEACHER)

Read the two questions together, emphasizing the underlined word - main. If the respondent is no longer working, use the past tense.

Be sure to obtain sufficient detail because the coders will have to categorize the information. For example, if the respondent says, "I worked in a factory," you should ask: "What kind of factory work did you do?" It is VERY IMPORTANT that you obtain sufficient information to know exactly what type of occupation the person had. For this question, it is better to write down more information, rather than leave too little information. If you ask any probing questions, you should write down your probe in the left margin.

25A. What kind of business, industry, or organization is (was) that in? What do (did) they do or make?

(EXAMPLES: TV MANUFACTURER, RETAIL SHOE STORE, STATE LABOR DEPARTMENT)

Is (was) it wholesale, retail, manufacturing, or what?

Read the two questions together. Use the past tense if the respondent is no longer working. Again, be sure to obtain sufficient information. If you ask any probing questions, you should write down your probe in the left margin.

26. Please turn to card #26. Now, thinking of your entire family, all those related to you in this household, look at the card and tell me the letter of the income group that includes the total income for your family, from all sources, before taxes for last year. Please include your (and your spouse's) income. Do not include unrelated people.

A	.01
B	.02
C	.03
D	.04
E	.05
F	.06
G	.07
H	.08
I	.09
J	.10
DON'T KNOW	.98
REFUSED	.99

Question 26 (Continued)

Read this question slowly, in a calm matter-of-fact tone, emphasizing the underlined words: family, this, letter, before, and not. You will find that most people do not mind being asked income questions, if they feel that the study is legitimate and that the information is confidential. If a respondent is not sure whether to answer or not, you can reassure him or her by saying: "As I've said, all information is strictly confidential. No information on individuals will be released. Only information about the community as a whole will be given out."

It is important that the respondent indicates an income group that includes the following:

1. All income from all family members living in the same household. For example, if a respondent has a son or daughter living away from the household and earning a separate income, this does not count.

2. Income from unrelated persons in the household should not be included. For example, if the respondent is a houseowner and there is a renter living in the household, the renter's income is not part of the estimate. Any rent the renter pays, however, would be a part of the estimate.

3. Income from all sources should be included. This includes income from wages, salaries, interest, dividends, rent, pension, social security, and so forth. The respondent ought to know the information because every year tax returns must be filled out.

4. Income should be estimated before taxes.

5. The time period to be considered is LAST YEAR.

6. You only want the letter of the income group, not the amount. Circle the appropriate code.

After the respondent has made a response, ask: "Does that include everyone in your family who lives here? Is that before taxes or any deductions?" If the respondent does not know or is uncertain, ask: "What would be your best guess?" It is important that you code the information down in a matter-of-fact way and go on to the next question. DO NOT read any of the income groups unless the respondent is illiterate or has difficulty in reading.

27. Please turn to card #27. Tell me which one of these best describes your racial background or heritage?

a.	WHITE/ANGLO/EUROPEAN	1
b.	BLACK/NEGRO/AFRO-AMERICAN	2
c.	HISPANIC/LATIN AMERICAN/ SPANISH-PORTUGUESE HERITAGE	3
d.	ASIAN/PACIFIC ISLANDER/ ASIAN-AMERICAN	4
e.	NATIVE AMERICAN/AMERICAN INDIAN/ ALASKAN NATIVE	5
f.	MIDDLE EASTERN/ARAB/NORTH AFRICAN . . .	6
g.	OTHER	7
	SPECIFY:______________	

Read the question, emphasizing the underlined words: one and best. DO NOT read the responses to the respondent. Circle the appropriate code. If the respondent chooses more than one of these categories, ask: "Would you say that one of these is more important in your background than the other?" If the respondent still gives more than one, circle all mentioned codes and write down what the respondent said VERBATIM. Remember, this is the respondent's self identification; therefore, do not react to anything the respondent may say.

28. Please turn to card #28. Do you (or does your family) own this house (apartment)? Do you pay rent, or what?

HOUSE OWNED BY ME OR MY FAMILY (OR BEING BOUGHT NOW)	4
APARTMENT OR CONDOMINIUM OWNED BY ME OR MY FAMILY (OR BEING BOUGHT NOW)	3
HOUSE OR APARTMENT RENTED	2
NEITHER OWN RESIDENCE NOR PAY RENT .	1

Question 28 (Continued)

Read the question and circle the appropriate code. The only category you might have difficulty with is NEITHER OWN RESIDENCE NOR PAY RENT. Some examples of this category would be: Live with Parents/Other Relatives; Live for Free with Friend; Someone who Is Exchanging Services for Living Quarters (e.g., Caretaker).

Verification and Closing

At this point, ask the respondent whether you might have his or her name and telephone number so that your supervisor can verify that the interview took place. Explain, if the respondent inquires, that the purpose is to maintain quality control of your interviewing, and that a certain percentage of the interviews will be verified. Reassure the respondent that the answers to the questionnaire will be kept completely confidential and that only the results for the community as a whole will be presented.

Thank the respondent warmly for having participated in the study, and leave a Thank-You Card with him or her. You should record the time the interview ended on page 18 and at this point indicate the number of interrupted minutes (if any).

G.5.5 Observation Sheet (Figure G-12)

Immediately upon leaving the house, fill out the observation sheet on page 18.

B1 Sex of Respondent

B2 Building Capacity

You will have to look at other addresses in the same building in order to determine how many household units are in the building.

B3 Building Orientation

Estimate the distance from the dwelling to the street (in feet). You should take the distance from the front door of the building to the curbside. This is not necessarily the distance from the interviewed household to the curbside. The estimate is, instead, approximately the average distance from the outside of the building to the street. If there is no front door or if there is no curbside, take some other feature of the building as a reference point and take the approximate place where the street begins. Be sure to estimate in feet.

B4 Construction Type

Masonry includes brick, stucco, cement and other laid-on materials. Wood frame is basically made of wood.

B5 Sex of Interviewer

B6 Language of Interview

G.5.6 Editing the Questionnaire

Each questionnaire should be edited carefully as soon as possible after its completion, while it is still fresh in your mind. A thorough edit on your part is essential to guarantee that the information collected will be useful.

The interviewer edit involves the following tasks:

A. TIME INTERVIEW ENDED: ________ AM/PM

B. TIME INTERVIEW BEGAN: ________ AM/PM
(Refer to page vii)

C. INTERRUPTION: # OF MINUTES: ________

TOTAL # OF MINUTES: ________
(= A - B - C)

CONFIDENTIAL

FILL IN THE FOLLOWING ITEMS
IMMEDIATELY AFTER LEAVING RESPONDENT'S HOME:

B1. Respondent Was:

Male	1
Female	2

B2. Building Capacity:

A One-Family House Detached from Any Other Houses	1
A One-Family House Attached to One or More Houses	2
A Building for Two Families or Duplex	3
A Building for Three or Four Families	4
A Building for Five to Nine Families	5
A Building for 10 to 19 Families	6
A Building for 20 or More Families	7
A Mobile Home or Trailer	8
Other	9

SPECIFY: ________________

B3. Building Orientation:

Estimate Distance from Dwelling to Street (in feet): ________ Feet

B4. Construction Type:

Masonry	1
Wood Frame	2

B5. Sex of Interviewer:

Male	1
Female	2

B6. Language of Interview:

English	1
Spanish	2
Other	3

SPECIFY: ________________

Figure G-12

1. Check that the Call Record Sheet is correctly filled out.
2. Check that the Selection Roster is correctly filled out.
3. Check that your name and interviewer ID number are recorded on both page i and page v.
4. Check that the time beginning (on p. vii) and the time ending (on p. 18) are recorded.
5. Check that NO questions have been MISSED.
6. Check that handwriting is legible.
7. Check that only code numbers have been circled, not letters.
8. Check that all Open-Ended questions have been completed (Q3, Q4, Q25, Q25A).
9. Check that all PROBES have been clearly marked in the left-hand margin.
10. Check that all SKIP instructions have been followed (Q19, Q25).
11. Check that the observation sheet is completed (B1 through B6).

G.6.0 DEVELOPING GOOD INTERVIEWING SKILLS

In this section, we will discuss briefly some skills that you should develop to make you a good interviewer.

G.6.1 Characteristics of a Good Interviewing Relationship

The characteristics of a good interviewing relationship can be described in the following terms.

Adapt Your Approach to the Situation

The most successful interviewer is one who is able to size up the situation quickly on the basis of what little information is available and to act accordingly. Approach each respondent (or initial contact) as though he or she is friendly and interested. Vary your approach according to your intuition about the person. With some respondents, you can get an interview with only a brief explanation of basic points, but with others you will need to go into more detail.

Rapport Is Your Goal

Rapport is the personal relationship of confidence and understanding between the interviewer and the respondent; it provides the foundation for good interviewing. The respondent's impression of you during your introduction, and the manner in which you adapt yourself to the situation from the respondent's point of view, determines considerably the rapport that will develop.

A requisite to good rapport is that the respondent knows where he or she stands in the interview. The interview is actually a new situation for most people, and when it begins, the respondent doesn't know what is expected or how safely opinions can be expressed. The respondent's reaction to the interviewer as a person is very important. The respondent will react more favorably if he or she gets the feeling that the person at his door is sincerely interested in his or her opinion.

Help the Respondent See the Survey as Being Important and Worthwhile

The interviewer should try to interest the respondent in the study. Hopefully you can get the respondent to see the interview as a real opportunity to express his or her views. The respondent needs to understand what is expected during the interview, what the purpose of the interview is, and how the information will be used. The full burden of the introduction is on the interviewer. All respondents, even those who are least interested, should feel that the survey is important and that their cooperation is meaningful to the survey results.

Barriers to the Interview in the Respondent's Mind Need to be Overcome

The interviewer must be alert to doubts the respondent may feel, even if the respondent does not express them vocally. The respondent may feel that the interviewer is a salesperson of some sort or the respondent may feel inadequate, may feel that he or she doesn't know enough, or that he or she will be embarrassed by difficult questions or by giving the wrong answers. Any such perceptions on the part of the respondent must be neutralized by the interivewer's early statements. This can be done briefly by your making convincing statements on the purpose of the study, how the respondent was selected, and the anonymous or confidential nature of the interview. Assure the respondent that there are no right or wrong answers. We are interested in his or her opinions only.

Create an Open Atmosphere

Express warmth and responsiveness on your part. The respondent needs to feel the interviewer is genuinely interested, and accepts him or her as a person.

Create a permissive atmosphere in which the respondent feels completely free to express any feeling or viewpoint. By your attitude and behavior you demonstrate that no answer is out of place.

Ensure the respondent freedom from any kind of pressure or directive questioning. You must in no way state your ideas, reactions, or preferences. Although you are permissive and understanding, you must remain objective.

In this kind of atmosphere, THE RESPONDENT NOT ONLY FEELS FREE TO TALK, BUT IS ACTUALLY STIMULATED TO TALK.

Be Sensitive for Illiterate Respondents

It is possible that some respondents will not know how to read. Be alert for signals of this, both at the start and at the close of the interview. If you think he or she is illiterate, suggest tactfully that you read the letter of introduction or the response cards. In this way, you will make the individual feel comfortable in the situation rather than feeling self-conscious and inadequate.

Reassure Confidentiality

Periodically throughout the interview (whenever you deem it advisable), reassure the respondent that all the information is strictly confidential and that it will be seen only by persons engaged in the survey and will be used for research purposes only. The respondent's answers will not be disclosed or released to others for any reason.

Leaving the Respondent

The respondent should feel that his or her time has been well spent and that the interview has been worthwhile. Any questions or doubts he or she might have about the interview should be cleared up before you leave. If the respondent has any questions, answer them. Hand him or her a Thank-You Card and then thank him or her for the cooperation and time. It is important to leave the respondent with a friendly feeling toward the city, the interview, and you.

G.6.2 Using the Questionnaire

Use the Questionnaire, but Use It Informally

The interview should be taken in an informal and relaxed atmosphere. You should avoid creating the impression that the interview is a quiz or cross-examination in any sense; you must be careful that nothing in your words or manner implies criticism, surprise, approval or disapproval of either the questions or the respondent's answers.

Don't Hurry the Pace of the Interview

Try to avoid hurrying the interview, even under trying circumstances. If the respondent senses that you are in a rush to complete the questions and leave, he or she will probably cooperate by omitting important information he or she feels would take too much time to explain and record. Maintaining a calm, unhurried manner and asking the questions in an objective and deliberate way will do much to promote an attitude of relaxed attention on the part of the respondent.

Ask the Questions Exactly as Worded in the Questionnaire

The wording and order of the questions have been tested previously and are designed to obtain the desired information. Do not reword any question. Read to the final question mark and stop. The questionnaire has been formatted for easy handling. DO NOT READ MATERIAL PRINTED IN CAPITAL LETTERS. THESE ARE INSTRUCTIONS TO YOU.

Ask the Questions in the Order Presented in the Questionnaire

Question order needs to be standardized from respondent to respondent to insure comparable data.

Ask Every Question Specified in the Questionnaire

In answering one question, a respondent will sometimes also answer another question appearing later in the interview. Or, from time to time, when the interviewer needs to ask a series of apparently similar questions, the respondent may say, "Just put me down as 'Yes' to all of them." In this case, you may wonder whether you should skip the questions which are apparently answered. The answer to this question is NO. In cases where asking the question will lower rapport dangerously, you must, of course, be satisfied with what you already have. However, it is your responsibility to make certain that the respondent is fully exposed to each question specified in the questionnaire. Every question should be asked even when it has been previously answered. You can do this by letting the respondent know you are aware of the earlier response and by asking the respondent's cooperation in answering again.

- Listen to the Respondent

Listen to the respondent until he or she finishes each statement. Failure to do so can result in your putting down incorrect or incomplete entries. The two most common errors of this type are:

a. Failure to listen to the last half of the sentence because you are busy recording the first half.

b. Interrupting the respondent before he or she has finished, especially if the respondent hesitates. A respondent often hesitates when trying to recollect some fact, and you should allow sufficient time for this to be done. Also, people will sometimes answer, "I don't know," when actually they are merely considering a question. When you think that this may be the situation, wait for the respondent to finish the statement before repeating the question or probing.

- Repeat and Clarify Questions which are Misunderstood or Misinterpreted

Questions are phrased to be understood by respondents from different social groups and geographical locales, and you will find that most of the people you interview do indeed understand them. Occasionally, however, a respondent may misunderstand or misinterpret what is asked. When this happens, you can only repeat the question just as it is written in the questionnaire; this should not prove to be embarrasing since what you said the first time was not heard or understood. Frequently the respondent is capable of understanding the question, but has missed a word or two. If you think it is helpful, you can preface the repetition of the question by a phrase such as "I see," or "Oh, yes," and then repeat the actual question. A conversational tone will go far in making the question sound new, even though you are using exactly the same words.

Probing

Probing is the process of asking a question in order to obtain more information. In this questionnaire, two probes are permitted:

1. Probing for three mentions in Questions 3 and 4. In this case, you are trying to get the respondent to give you additional mentions. You should not make any suggestions if the respondent cannot think of any additional mentions.

2. Probing for more complete information in Questions 25 and 25A. In this case, you are trying to get the respondent to give more detailed information on his or her occupation so that it can be coded more easily. This information is factual.

In addition, you may have to provide additional explanation of a question or give the accepted definitions in order to explain a question. You should do this, however, only when the respondent does not understand the question. You should NEVER provide comments that would predispose the respondent into giving one type of answer or another. All comments and explanations, including probes, made by you during the course of the interview should appear in the questionnaire at the point where they were made in the interview. They should be written in the left margin.

Gather Background Information as You Would Other Information

Questions about the respondent's age, schooling, occupational status, income, racial background, and housing status are at the end of the questionnaire (Questions 22 through 29). There is generally no resistance on the part of the respondent to this personal data. If, however, the respondent asks why you want age, occupation, income, or something else, you might say something like this:

> "Well, as I was saying earlier, we are talking with people of different ages and various occupations in all parts of the city. We put all the interviews together to see whether men feel differently than women, whether young people feel differently than old people, and so on. To do this, we need to know a few things about the people we talk to."

This gives the respondent a logical reason for our desiring the information and shows him or her why cooperation will be of help. If there seems to be a need for further reassurance, you may add: "As I mentioned, the interview is completely confidential. The survey report is simply a summary of all the interviews, without, of course, identifying anyone."

If you are matter-of-fact in your approach, you will probably not encounter any problems. People are accustomed to giving such information about themselves to various agencies, so that gathering such data represents much less difficulty than new interviewers often imagine.

G.6.3 Special Responses

There are three special responses which you may encounter: the "I Don't Know" response, the "Refused" response, and the "Terminated Interview."

The "I Don't Know" Response

The "I don't know" answer can mean any number of things. For instance, the respondent doesn't understand the question and answers with a "don't know" to avoid saying he or she doesn't understand. The respondent is thinking the question over and says, "I don't know" to fill the silence but to give him or herself time to think too. The respondent may be trying to evade the issue because of feelings of being uninformed, or the question may seem too personal. The respondent may really not know, or he or she may have no opinion or attitude on the subject. If the respondent actually doesn't have the information requested, this is, in itself, significant to the survey results. But it is the interviewer's responsibility to make sure this is the case. An expectant pause, a reassuring remark ("Well, we're just interested in your general ideas about this"), repeating the question, a neutral question ("What are your ideas about this?") — all will encourage the respondent to reply. If the respondent truly does not know the answer, either circle the "Don't Know" category (for those questions where it is provided) or else write "Don't Know" next to the question.

The "Refused" Response

In some rare instances, a respondent may refuse to answer a question. For example, a respondent feels resentment toward a particular question or feels that it is an invasion of his or her privacy. In this case, you will have to skip over this question to the next one. But be sure that the respondent has actually emphatically refused to answer a question. He or she may express dislike about a particular question, but may still answer it. If you sense that the refusal is not a strong one, try to encourage the respondent with a comment such as: "Couldn't you give me a brief answer, even a rough one?" "I'd appreciate it if you would give me an answer to that question. It will be important for us to understand what people in this community think about it." "It would really help us to know what you feel about this," or "Are you sure you couldn't give an answer? It would be very useful." Be sure to make your comment appropriate to the respondent's refusal and BE SURE NOT TO ANTAGONIZE THE RESPONDENT IN QUESTIONING A REFUSAL. The respondent may object to your questioning and may terminate the entire interview. A respondent does have a right not to answer a question if he or she doesn't want to. In the case of a refused answer, write "Refused" next to the question and anything else the respondent says about the question which tells why he or she refused to answer. Write this in the respondent's own words.

The Terminated Interview

A similar issue can occur if the respondent decides to quit the entire interview and not answer any more questions. If the refusal is not a hostile or convincing one, probe gently. But if the respondent insists on the termination, respect the decision and politely leave the situation. Never antagonize the respondent when you leave a terminated interview. Notate this by writing "Terminated" across the front of the questionnaire and at the point where the interview was stopped, and add any comments the respondent made about the reasons for the termination — in the respondent's own words.

G.7.0 EXAMPLES OF COMPLETED QUESTIONNAIRES

Example 1

COMMUNITY ENVIRONMENT QUESTIONNAIRE

Table 06

If the # of Adults is:	1	2	[✓ 3]	4	5	6 or more
Then Select Adult #:	1	1	[✓ 2]	2	3	3

NZ 02
AR 5
CL 068
CTY 010

①

START CARD 1

ID#	1	2	3	4	5
	0	6	8	0	3
CARD:	6	7			
	0	1			
NZ:	8	9			
AR:	10				
CL:	11	12	13		
CTY:	14	15	16		
SELECTION LABEL #:	17	18			
# CALLS:	19				
INTERVIEW DATE:	20	21			

Address 4225 1/2 W. ADAMS St.

City/Community LAWNDALE Respondent # 068-03

Call Record Sheet

1st Interviewer Maria Dorne ID# 42 # Calls 4

2nd Interviewer ______ ID# ______ # Calls ______

DATE	DAY OF WEEK	TIME	RESULT (CODE EVERY CALL)
1) 5/15/78	Monday	10^{00} [✓ am] pm	01
2) 5/17/78	Wednesday	7^{10} am [✓ pm]	04
3) 5/20/78	Saturday	11^{15} [✓ am] pm	03 Sunday 12^{00}
4) 5/21/78	Sunday	12^{00} am [✓ pm]	90
5)		am pm	

RESULT:

no one home/no answer — 01	respondent ill - no appointment — 07
respondent not at home — 02	appt. cancelled by initial contact — 08
appointment made — 03 — WRITE TIME/DATE	appt. cancelled by respondent — 09
initial contact busy - no appointment — 04	non-interview — 82
respondent busy - no appointment — 05	completed an appointment — 90
initial contact ill - no appointment — 06	completed no appointment — 91

	DATE	INITIAL
LOGGED OUT	5/13	PB
LOGGED IN/TO EDITING	5/21	PB
EDITING COMPLETE		
SELECTED FOR VALIDATION		
VALIDATION COMPLETE		

	DATE	INITIAL
LOGGED BY CODING		
CLOSED-ENDED CODING COMPLETE		
QUALITY CONTROL OF CLOSED-ENDED CODING		
OPEN-ENDED CODING COMPLETE		
QUALITY CONTROL OF OPEN-ENDED CODING		

	DATE	INITIAL
FINAL CHECK		

CONFIDENTIAL

①

FOR NON-INTERVIEWS ONLY

FIRST INTERVIEWER

A.

Vacant	01
Address not a dwelling	02
No such address	03
No one at home, final call	04
Respondent not at home, final call	05
Language barrier	06
(What language? ______)	
Secure residence	07
Secure apartment building	08
Manager refuses	09
Initial contact incapable	10
WHY?: ______	
Initial contact refused	20
WHY?: ______	
Respondent incapable	30
WHY?: ______	
Respondent refused	40
VERBATIM: ______	
Refused to open door	50
COMMENTS: ______	
Other	60
⊳ SPECIFY: ______	

SECOND INTERVIEWER

E.

Vacant	01
Address not a dwelling	02
No such address	03
No one at home, final call	04
Respondent not at home, final call	05
Language barrier	06
(What language? ______)	
Secure residence	07
Secure apartment building	08
Manager refuses	09
Initial contact incapable	10
WHY?: ______	
Initial contact refused	20
WHY?: ______	
Respondent incapable	30
WHY?: ______	
Respondent refused	40
VERBATIM: ______	
Refused to open door	50
COMMENTS: ______	
Other	60
⊳ SPECIFY: ______	

①

III

CONFIDENTIAL

FOR NON-INTERVIEWS ONLY

FIRST INTERVIEWER

B. REFUSER

Black, non-Spanish surname	1
Spanish surname	2
Oriental	3
White, non-Spanish surname (not Oriental)	4
Other	5

SPECIFY: ____________________

____

C. REFUSER

Male	1
Female	2

D. AGE ESTIMATE OF REFUSER ____________

COMMENTS: ____________________

____

SECOND INTERVIEWER

F. REFUSER

Black, non-Spanish surname	1
Spanish surname	2
Oriental	3
White, non-Spanish surname (not Oriental)	4
Other	5

SPECIFY: ____________________

____

G. REFUSER

Male	1
Female	2

H. AGE ESTIMATE OF REFUSER ____________

COMMENTS: ____________________

____

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①

A1. RESPONDENT ID # 068-03

A2. INTERVIEWER: Maria Josue ID # 42

DOORSTEP INTRODUCTION (IN YOUR OWN WORDS)

Good Morning/Afternoon/Evening. I'm (........), a representative of (........ YOUR ORGANIZATION). (SHOW IDENTIFICATION)

We're taking a public opinion study in this area concerning the environment and its impact upon the community. Your house has been selected at random from among those around here. By interviewing select individuals, we can be sure we have scientifically represented the attitudes and opinions of the community. The more people who cooperate, the more successful we can be in representing all the people in this city.

I'd like to take a few minutes of your time and ask you a few questions. On the basis of these questions, a respondent will be scientifically selected to be interviewed. The actual interview will then take approximately 20 to 30 minutes. We feel that you will find our questions interesting. Everything you tell us will be strictly confidential. Your name will not be connected in any way with the findings of this very important study. This interview will be combined with others in the sample to give information about the community as a whole.

In this way, valuable information about the environment will be gathered which will help improve the quality of future city planning.

①

ROSTER FOR RESPONDENT SELECTION

I would like to make a list of the persons 18 years or over who live here as permanent members of your household. This will tell me which adult I am to interview.

A3. Starting with the oldest male, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT MALES HAVE BEEN LISTED.)

Now, taking the oldest female, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT FEMALES HAVE BEEN LISTED.)

COMPLETE COLUMNS B-D FOR EACH MENTION. IN COLUMN E, STARTING WITH THE FIRST PERSON LISTED, NUMBER ALL THOSE LISTED IN CONSECUTIVE ORDER (1,2,3,...ETC.). LOOK AT SELECTION TABLE ON FIRST PAGE TO DETERMINE WHICH NUMBER PERSON IS THE RESPONDENT. CIRCLE THE RESPONDENT'S NUMBER IN COLUMN E.

A First Name	B Is this (...)'s Permanent Residence?		C Sex		D Age on Last Birthday	E Number and Circle # Selected
	Yes	No	Male	Female		
1) Allen	[✓ 1]	2	[✓ 1]	2	64	1
2) [✓ James]	[✓ 1]	2	[✓ 1]	2	38	[✓ 2]
3) Victoria	[✓ 1]	2	1	[✓ 2]	36	3
4)	1	2	1	2		
5)	1	2	1	2		
6)	1	2	1	2		
7)	1	2	1	2		
8)	1	2	1	2		

IF NOT PERMANENT RESIDENCE, REMOVE (...) FROM ROSTER. RELIST MEMBERS IN ORDER (DO NOT SKIP A LINE NUMBER).

IF NO ONE IS A PERMANENT RESIDENT AT THIS ADDRESS, HOUSEHOLD BECOMES UNQUALIFIED.

TOTAL # ON LIST: 22 ☐

FOR R ONLY

R # ON LIST: 23 ☐

SEX OF R: 24 ☐

AGE OF R: 25 ☐ 26 ☐

END CARD 1

(YOU WILL NOW KNOW WHICH ADULT IN THE HOUSEHOLD YOU ARE TO INTERVIEW. IF THAT PERSON TO BE INTERVIEWED IS THE SAME PERSON AS THE "INITIAL CONTACT" YOU ARE ALREADY TALKING TO, ASK QUESTION A4. IF IT IS NOT THE SAME PERSON, ASK QUESTION A5.)

A4. **In checking my sampling table, I see that you are the person I am supposed to interview in this household.**

GO TO PAGE 1 AND START QUESTION 1.

A5. **In checking my sample table, I see that I must interview (.....), who is (male/female), and who is (AGE). Is (he/she) available now to be interviewed?**

(IF RESPONDENT IS AVAILABLE, MEET THE PERSON AND REPEAT INTRODUCTION ON PAGE iv.) IF NOT AVAILABLE, DETERMINE BEST TIME TO MEET WITH RESPONDENT.

You have been selected from a sampling table to be interviewed.

GO TO PAGE 1 AND START QUESTION 1.

A6. TIME BEGINNING: 12^{15} AM [✓ PM]

1. How long have you lived in this area at your present address or within a few blocks of this address?

ENTER ACTUAL NUMBER OF YEARS, ROUNDED TO NEAREST YEAR (1/2-YEAR OR MORE ROUNDED UP). IF "ALL MY LIFE" OR "LESS THAN 6 MONTHS," CODE BELOW.

RECORD YEARS: 12

LESS THAN 6 MONTHS 95

ALL MY LIFE
(REGARDLESS OF HOW LONG). 90

2. How would you rate the area in which you live? Would you say it was:

Very Good, ... 5
Good, ... 4
Fair, ... [✓ 3]
Poor, or 2
Very Poor? 1

3. Now, thinking of your area, what three things do you particularly like about this area; that is, within a few blocks of here?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION The neighbors are very nice
2nd MENTION It's safe at night
3rd MENTION There is convenient shopping

4. What are the three most important problems facing the residents of your area today?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION The kids from school hang around
2nd MENTION The motorcycles on 5th St.
3rd MENTION They should fix the sewers

She: What about the motorcycles? They make too much noise.

(2)

START CARD 2

ID#

1	2	3	4	5
0	6	8	0	

CARD:

6	7
0	2

Q1: 8 9 ☐☐

Q2: 10 ☐

Q3:
1st: 11 12 ☐☐
2nd: 13 14 ☐☐
3rd: 15 16 ☐☐

Q4:
1st: 17 18 19 ☐☐☐
2nd: 20 21 22 ☐☐☐
3rd: 23 24 25 ☐☐☐

②

5. As I read the following list, would you tell me whether any of these are problems here in this area? Please answer "Yes" or "No".

READ (a–h). CIRCLE APPROPRIATE CODE IN COLUMN A.

(We will be using cards to identify your answers to various questions. Each card is numbered at the top right-hand corner. Please do not turn the cards until I tell you to do so.)

FOR EACH "YES" IN COLUMN A, ASK: Please turn to Card #5. How severe a problem is (...)? INSERT EACH PROBLEM WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Would you say that (...) is a Problem?	YES	NO	EXTREMELY SEVERE	QUITE SEVERE	MODERATELY SEVERE	NOT VERY SEVERE	DON'T KNOW
a. Traffic Congestion?	[✓ Y]	N	5	[✓ 4]	3	2	8
b. Polluted Water?	Y	[✓ N]	5	4	3	2	8
c. Noise?	[✓ Y]	N	5	4	3	[✓ 2]	8
d. Crime?	Y	[✓ N]	5	4	3	2	8
e. Run-Down Areas in Need of Improvement?	[✓ Y]	N	5	4	[✓ 3]	2	8
f. Unclean Air?	Y	[✓ N]	5	4	3	2	8
g. Parking?	[✓ Y]	N	[✓ 5]	4	3	2	8
h. Inadequate Low-Income Housing?	Y	N	5	4	3	2	[✓ 8]

Q5:
a: 26 ☐
b: 27 ☐
c: 28 ☐
d: 29 ☐
e: 30 ☐
f: 31 ☐
g: 32 ☐
h: 33 ☐

②

6. Please look at card #6. As I read the following, please tell me how you would rate each of the local public services in this area?

READ (a-k). CIRCLE APPROPRIATE CODE.

How Would You Rate:	VERY GOOD	GOOD	FAIR	POOR	VERY POOR	DON'T KNOW/ DOESN'T APPLY
a. Quality of Schools?	5	[✓ 4]	3	2	1	8
b. Police Protection?	5	4	[✓ 3]	2	1	8
c. Fire Protection?	5	4	[✓ 3]	2	1	8
d. Recreation Facilities?	5	4	3	2	[✓ 1]	8
e. Garbage Collection?	5	4	3	[✓ 2]	1	8
f. Hospitals and Health Facilities?	5	[✓ 4]	3	2	1	8
g. Public Transportation?	5	4	3	2	[✓ 1]	8
h. Street Maintenance?	5	4	[✓ 3]	2	1	8
i. Sewage and Drainage?	5	4	3	2	1	[✓ 8]
j. General Pollution Control?	5	4	3	2	1	[✓ 8]
k. Noise Control?	5	4	3	2	[✓ 1]	8

I'd like to ask you a question about your health. This will allow us to better understand your answers to the remaining questions.

7. How would you rate your health overall? Would you say that your health is:

Very Good, ...5
Good, ...4
Average, ...3
Poor, or 2
Very Poor? 1

"It's none of your business — my health."

Refused

Q6:
a: 34 ☐
b: 35 ☐
c: 36 ☐
d: 37 ☐
e: 38 ☐
f: 39 ☐
g: 40 ☐
h: 41 ☐
i: 42 ☐
j: 43 ☐
k: 44 ☐

Q7: 45 ☐

②

Now, in the following questions I will be asking you about the quietness of this area; that is, within a few blocks or so.

8. Please turn to card #8. Looking at the card, please tell me how quiet or noisy you consider this area to be?

VERY QUIET	4
QUIET	3
NOISY	[✓ 2]
VERY NOISY	1

Q8: 46 ☐

Please turn to card #9. As you can see at the top of this card, we have defined the word annoyed as meaning: to be disturbed, stressed, or upset by the repeated occurrence of noise. There is then a scale of annoyance, showing the amount of annoyance from Most to Least.

9. Now, using this card, please tell me which one of these best describes how annoyed you are by noise in this area?

TREMENDOUSLY ANNOYED	1
HIGHLY ANNOYED	2
CONSIDERABLY ANNOYED	3
MEDIUM ANNOYED	[✓ 4]
PARTIALLY ANNOYED.	5
A LITTLE ANNOYED	6
NOT AT ALL ANNOYED	7

Q9: 47 ☐

②

10. Does noise interfere with any of the following activities? Please answer "Yes" or "No." READ (a-d). CIRCLE APPROPRIATE CODE IN COLUMN A.

FOR EACH "YES," READ ACTIVITY AND ASK: Please turn to card #10. How often does it interfere with (...)? INSERT EACH ACTIVITY WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Does Noise Interfere with:	YES	NO	ALWAYS INTERFERES	FREQUENTLY INTERFERES	SOMETIMES INTERFERES	RARELY INTERFERES	DON'T KNOW
a. Sleeping?	[✓ Y]	N	5	4	[✓ 3]	2	8
b. Talking or Listening to the Radio, Watching TV, etc?	Y	[✓ N]	5	4	3	2	8
c. Reading?	[✓ Y]	N	5	4	[✓ 3]	2	8
d. Resting?	[✓ Y]	N	5	4	[✓ 3]	2	8

11. Please turn to card #11. During which of these time periods does noise annoy you most? CIRCLE ALL MENTIONS.

a. MORNING (7AM TO NOON) 1
b. AFTERNOON (NOON TO 6PM) 1
c. EVENING (6PM TO 10PM) . . . . . . [✓ 1]
d. NIGHTTIME (10PM TO 7AM) . . . . . [✓ 1]
e. ALL THE TIME 1
f. NOISE NEVER ANNOYS ME 1

Q10:
a: 48 ☐
b: 49 ☐
c: 50 ☐
d: 51 ☐

Q11:
a: 52 ☐
b: 53 ☐
c: 54 ☐
d: 55 ☐
e: 56 ☐
f: 57 ☐

②

12. Generally speaking, do you think noise affects your physical or emotional health and well-being?

YES . . . . [✓ .3]
NO 1
MAYBE 2

Q12: 58 ☐

13. Does noise affect your health in any of the following ways? Please answer "Yes" or "No." READ (a-e). CIRCLE APPROPRIATE CODE IN COLUMN A.

FOR EACH "YES," READ SYMPTOM AND ASK: Please turn to card #13. How often does noise cause (...)? INSERT EACH SYMPTOM WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Does Noise Cause:	YES	NO	ALL THE TIME	FREQUENTLY	SOMETIMES	RARELY	DON'T KNOW
a. Headaches?	[✓ Y]	N	5	4	[✓ 3]	2	8
b. Tiredness?	Y	[✓ N]	5	4	3	2	8
c. Irritability?	[✓ Y]	N	5	[✓ 4]	3	2	8
d. Hearing Loss or Difficulties?	Y	[✓ N]	5	4	3	2	8
e. An Existing Health Problem to Get Worse?	Y	[✓ N]	5	4	3	2	8

Q13:
59 a: ☐
60 b: ☐
61 c: ☐
62 d: ☐
63 e: ☐

14. Please turn to card #14. To what extent have you become accustomed to noise?

HIGHLY ACCUSTOMED 5
QUITE ACCUSTOMED 4
MEDIUM ACCUSTOMED 3
NOT VERY ACCUSTOMED . . . . . . [✓ .2]
NOT AT ALL ACCUSTOMED 1

Q14: 64 ☐

15. Please turn to card #15. To reduce noise in your home, have you or any member of your household taken any of these actions?

CIRCLE ALL MENTIONS.

- a. USE INSULATION OR SOUNDPROOFING 1
- b. CLOSE DOORS OR WINDOWS . . . . [✓ 1]
- c. TURN-ON OR TURN-UP RADIO, TV, OR STEREO TO MASK NOISE . . . . [✓ 1]
- d. WEAR EARPLUGS 1
- e. CHANGE LOCATION OF SLEEPING QUARTERS 1
- f. CONSIDERED MOVING 1
- g. NONE OF THESE 1

16. Please tell me whether you or any member of your household have done any of these things to help reduce noise in this area? Please answer "Yes" or "no."

	YES	NO
a. Complaining to a Neighbor About Making Too Much Noise?	[✓ 1]	0
b. Writing, Telephoning, or Visiting an Official?	1	[✓ 0]
c. Initiating Legal Action?	1	[✓ 0]

②

Q15:

a: ☐ 65
b: ☐ 66
c: ☐ 67
d: ☐ 68
e: ☐ 69
f: ☐ 70
g: ☐ 71

Q16:

a: ☐ 72
b: ☐ 73
c: ☐ 74

END CARD 2

③

START CARD 3

ID#

1	2	3	4	5
0	6	8	0	

CARD:

6	7
0	3

Now I'd like to explore some specific noise sources that may or may not annoy you in this area.

17. Please turn to card #17. As I read the following list of noise sources, tell me how annoyed you are by each noise source in this area.

READ (a-o). CIRCLE APPROPRIATE CODE.

How Annoyed are You by Noise from (...)?	TREMENDOUSLY ANNOYED	HIGHLY ANNOYED	CONSIDERABLY ANNOYED	MEDIUM ANNOYED	PARTIALLY ANNOYED	A LITTLE ANNOYED	NOT AT ALL ANNOYED
a. Traffic?	1	[✓ 2]	3	4	5	6	7
b. Motorcycles?	[✓ 1]	2	3	4	5	6	7
c. Trucks?	1	2	[✓ 3]	4	5	6	7
d. Buses?	1	2	3	4	[✓ 5]	6	7
e. Automobiles?	1	2	3	[✓ 4]	5	6	7
f. Highways or Freeways?	1	2	3	4	5	[✓ 6]	7
g. Recreational Vehicles (e.g., Snowmobiles?)	1	2	3	"I don't know about these." 4	5	6	7
h. Garbage Trucks?	1	2	3	4	[✓ 5]	6	7
i. Emergency Vehicles/ Sirens?	1	2	3	[✓ 4]	5	6	7
j. Entertainment Centers (e.g., clubs, movies, places that play live music)?	1	2	[✓ 3]	4	5	6	7
k. Pets/Animals?	1	2	3	4	5	6	[✓ 7]
l. Neighbors' Homes (e.g., noisy stereo, loud talking)?	1	2	3	4	5	6	[✓ 7]
m. Air Conditioners?	1	2	3	4	5	6	[✓ 7]
n. Lawnmowers/ Garden Equipment?	1	2	3	4	5	6	[✓ 7]
o. Jet Airplanes?	1	2	3	4	[✓ 5]	6	7

QUESTION 17 CONTINUES ON NEXT PAGE.

Q17:

a:	8 ☐
b:	9 ☐
c:	10 ☐
d:	11 ☐
e:	12 ☐
f:	13 ☐
g:	14 ☐
h:	15 ☐
i:	16 ☐
j:	17 ☐
k:	18 ☐
l:	19 ☐
m:	20 ☐
n:	21 ☐
o:	22 ☐

③

17. (Continued)

How Annoyed are You by Noise from (...)?	TREMENDOUSLY ANNOYED	HIGHLY ANNOYED	CONSIDERABLY ANNOYED	MEDIUM ANNOYED	PARTIALLY ANNOYED	A LITTLE ANNOYED	NOT AT ALL ANNOYED
p. Small Airplanes?	1	2	3	4	5	6	[✓ 7]
q. Helicopters?	1	2	3	4	5	[✓ 6]	7
r. Trains?	1	2	3	4	5	6	[✓ 7]
s. Construction Noise?	1	2	3	4	[✓ 5]	6	7
t. Commercial or Industrial Equipment?	1	2	3	4	5	[✓ 6]	7

u. What Other Noise Sources Annoy You?

The crowds during football season at the stadium.
First Mention

None Other
Second Mention

Q17:
p: 23 ☐
q: 24 ☐
r: 25 ☐
s: 26 ☐
t: 27 ☐
u:
1st: 28 ☐ 29 ☐
2nd: 30 ☐ 31 ☐

③

Now I'd like to ask you some questions about reducing noise in this area.

18. Please turn to card #18. Which of the following should be responsible for reducing noise in this area?

CIRCLE ALL MENTIONS.

a. MANUFACTURER 1
b. OPERATOR/OWNER . . . . [✓ 1]
c. LOCAL GOVERNMENT . . . . [✓ 1]
(Includes police, local noise control office, any other local administrative office)
d. STATE GOVERNMENT 1
e. FEDERAL GOVERNMENT 1
f. NONE 1

19. Do you think this community should have a noise control program to specifically work on reducing noise levels? This program would be funded by the community.

YES . . SKIP TO Q20 . . . . [✓ 2]
NO . . ASK Q19A. 1

19A. Please turn to card #19. Why do you feel that there should not be a noise control program in this community?

CIRCLE APPROPRIATE CODE.

	MENTIONED	NOT MENTIONED
a. I DON'T THINK ANYTHING CAN BE DONE	1	2
b. I DON'T CARE; I'M NOT BOTHERED ENOUGH	1	2
c. IT IS NOT THE RESPONSIBILITY OF THE COMMUNITY	1	2
d. IT IS TOO COSTLY	1	2

Q18:
a: 32 ☐
b: 33 ☐
c: 34 ☐
d: 35 ☐
e: 36 ☐
f: 37 ☐

Q19: 38 ☐

Q19A:
a: 39 ☐
b: 40 ☐
c: 41 ☐
d: 42 ☐

(TO PRECEDE Q20):

NOT TO BE INCLUDED IN PRINTED QUESTIONNAIRE

NOTE TO RESEARCHERS: FOR Q20, YOU MUST TYPE THE ACTUAL COST TO YOUR CITY IN THE APPROPRIATE SPACE. FOR a. YOU MULTIPLY $0.10 TIMES THE POPULATION SIZE OF YOUR CITY. FOR b. YOU MULTIPLY $0.25 TIMES THE POPULATION SIZE OF YOUR CITY. FOR c. YOU MULTIPLY $0.50 TIMES THE POPULATION SIZE OF YOUR CITY. FOR d. YOU MULTIPLY $1.00 TIMES THE POPULATION SIZE OF YOUR CITY. FOR e. YOU MULTIPLY $2.50 TIMES THE POPULATION SIZE OF YOUR CITY. FOR f. YOU TAKE THE FIGURE FOR e. AND TYPE IT AFTER "MORE THAN________."

③

Please turn to card #20. Keeping in mind your present level of taxes, how much in additional taxes would you be willing to pay on a yearly basis for a noise control program?

This card shows how much it will cost your city as a whole and how much it will cost each individual in the city.

How much would you be willing to pay in additional taxes for a noise control program?

Q20:

43 ☐

ADDITIONAL TAXES

COST TO CITY	COST TO INDIVIDUAL	
	(OR APPROXIMATELY 10¢ FOR EACH INDIVIDUAL A YEAR) . .	1
	(OR APPROXIMATELY 25¢ FOR EACH INDIVIDUAL A YEAR) . .	2
	(OR APPROXIMATELY 50¢ FOR EACH INDIVIDUAL A YEAR) . .	3
	(OR APPROXIMATELY $1.00 FOR EACH INDIVIDUAL A YEAR) .	[✓ 4]
	(OR APPROXIMATELY $2.50 FOR EACH INDIVIDUAL A YEAR) .	5
MORE THAN ____________	(OR MORE THAN $2.50 FOR EACH INDIVIDUAL A YEAR) . .	6
I WOULD NOT PAY ANY EXTRA TAXES FOR A NOISE CONTROL PROGRAM		7

③

21. If there were a noise control program funded by your community, which of the following suggestions would you support for community noise control? Please answer "Yes" or "No" after each suggestion is described.

READ (a–h). CODE IN APPROPRIATE COLUMN.

			DO NOT READ
Would you support:	YES	NO	DON'T KNOW
a. Making Noise Sources Quieter – for example, equipment manufacturers would be required to supply quieter products if economically possible.	[✓ 1]	0	8
b. Community Planning and Zoning – for example, industries or highways producing excessive noise would not be allowed to locate near residential areas.	1	[✓ 0]	8
c. Building Codes – for example, new buildings would have to be constructed to reduce interior noise levels.	[✓ 1]	0	8
d. Curfews – for example, work on a construction site would not be permitted in the nighttime or very early morning hours.	1	[✓ 0]	8
e. Fines for Making Too Much Noise – for example, people with automobiles and other vehicles having noisy mufflers would be fined.	[✓ 1]	0	8
f. Barriers – for example, barriers might be installed between a highway and densely-populated areas.	1	[✓ 0]	8
g. Traffic Planning – for example, traffic would be re-routed away from residential areas.	[✓ 1]	0	8
h. Public Information Campaign – for example, a program to inform citizens about noise control would be started.	[✓ 1]	0	8

Q21:

a: 44 ☐

b: 45 ☐

c: 46 ☐

d: 47 ☐

e: 48 ☐

f: 49 ☐

g: 50 ☐

h: 51 ☐

END CARD 3

Now, I'd like to ask you a few final questions about your background.

2. What was the month and year of your birth?

MONTH: October YEAR: 1940

3. What was the highest grade in school you completed and received credit for? CIRCLE ONE.

00 01 02 03 04 05 06 07 08 09 10 11 12

COLLEGE/OTHER POST HIGH SCHOOL SCHOOLING: [✓ 13] 14 15 16

POST GRADUATE SCHOOL: 17 18 19 20 OR MORE

24. Have you ever worked?

NO . . . . SKIP TO Q26 80
YES . . . . ASK A. . . . . [✓ X]

A. Please turn to card #24. What is your present employment status?

WORKING FULL-TIME . . . . [✓ 01]
WORKING PART-TIME 02
UNEMPLOYED 03
RETIRED 04
KEEPING HOUSE 05
IN SCHOOL 06
SOMETHING ELSE 07

SPECIFY: ____________________

CONTINUE WITH Q25, Q25A

④

START CARD 4

ID#

1	2	3	4	5
0	6	8	0	3

CARD: 6 7 — 0 4

Q22: 8 9 — ☐☐

Q23: 10 11 — ☐☐

Q24A: 12 13 — ☐☐

④

25. What kind of work do (did) you do? What is (was) your main occupation?

(EXAMPLES: ELECTRICAL ENGINEER, SHOE CLERK, JANITOR, TEACHER)

Insurance Agent

Q25:

Q25A:

14	15

25A. What kind of business, industry, or organization is (was) that in? What do (did) they do or make?

(EXAMPLES: TV MANUFACTURER, RETAIL SHOE STORE, STATE LABOR DEPARTMENT)

Is (was) it wholesale, retail, manufacturing, or what?

Life Insurance Company. It's part of a large national company.

④

26. Please turn to card #26. Now, thinking of your entire family, all those related to you in this household, look at the card and tell me the letter of the income group that includes the total income for your family, from all sources, before taxes for last year. Please include your (and your spouse's) income. Do not include unrelated people.

IF UNCERTAIN, ASK: What would be your best guess?

AFTER INITIAL RESPONSE, ASK: Does that include everyone in your family who lives here? Is that before taxes or any deductions?

A.	01
B.	02
C.	03
D.	04
E.	05
F.	06
G.	07
H.	[✓ 08]
I.	09
J.	10
DON'T KNOW	98
REFUSED	99

Q26:

16	17

④

27. Please turn to card #27. Tell me which one of these best describes your racial background or heritage?

IF R CHOOSES MORE THAN ONE, PROBE FOR MAIN ONE.

a. WHITE/ANGLO/EUROPEAN . . . . [✓ 1]

b. BLACK/NEGRO/AFRO-AMERICAN 2

c. HISPANIC/LATIN AMERICAN/ SPANISH-PORTUGUESE HERITAGE 3

d. ASIAN/PACIFIC ISLANDER/ ASIAN-AMERICAN 4

e. NATIVE AMERICAN/AMERICAN INDIAN/ ALASKAN NATIVE 5

f. MIDDLE EASTERN/ARAB/NORTH AFRICAN 6

g. OTHER 7

SPECIFY: ____________________

Q27: 18 ☐

④

28. Please turn to card #28. Do you (or does your family) own this house (apartment)? Do you pay rent, or what?

HOUSE OWNED BY ME OR MY FAMILY (OR BEING BOUGHT NOW) . . . . [✓ 4]

APARTMENT OR CONDOMINIUM OWNED BY ME OR MY FAMILY (OR BEING BOUGHT NOW) 3

HOUSE OR APARTMENT RENTED 2

NEITHER OWN RESIDENCE NOR PAY RENT 1

Q28:

19 ☐

29. Including yourself, and including all children, how many people usually live in this house (apartment)?

RECORD #: 3

Q29:

20 21 ☐☐

So my supervisor can verify that I completed this interview, please tell me your name and your phone number:

Name: Jim Benson

Telephone Number: 664- 1204

I would like to thank you on behalf of (NAME OF SPONSORING ORGANIZATION) for taking the trouble to provide us some very valuable information.

****

END OF INTERVIEW

****

④

A. TIME INTERVIEW ENDED: 12 ^{50} AM [✓ PM] TOTAL # OF MINUTES: 32
(= A - B - C)

B. TIME INTERVIEW BEGAN: 12 ^{15} AM [✓ PM]
(Refer to page vii)

C. INTERRUPTION: # OF MINUTES: 3

TIME: 22 23 ☐☐

CONFIDENTIAL

FILL IN THE FOLLOWING ITEMS
IMMEDIATELY AFTER LEAVING RESPONDENT'S HOME:

B1. Respondent Was:
- Male . . . . [✓ 1]
- Female 2

B1: 24 ☐

B2. Building Capacity:
- A One-Family House Detached from Any Other House . . . . . [✓ 1]
- A One-Family House Attached to One or More Houses 2
- A Building for Two Families or Duplex 3
- A Building for Three or Four Families 4
- A Building for Five to Nine Families 5
- A Building for 10 to 19 Families 6
- A Building for 20 or More Families 7
- A Mobile Home or Trailer 8
- Other 9
  - SPECIFY: ______

B2: 25 ☐

B3. Building Orientation:

Estimate Distance from Dwelling to Street (in feet): 25 Feet

B3: 26 27 28 ☐☐☐

B4. Construction Type:
- Masonry . . . . [✓ 1]
- Wood Frame 2

B4: 29 ☐

B5. Sex of Interviewer:
- Male . . . . [✓ 1]
- Female 2

B5: 30 ☐

B6. Language of Interview:
- English . . . . [✓ 1]
- Spanish 2
- Other 3
  - SPECIFY: ______

B6: 31 ☐

END CARD 4

Example 2

COMMUNITY ENVIRONMENT QUESTIONNAIRE

Table 01

If the # of Adults is:	[✓ 1]	2	3	4	5	6 or more
Then Select Adult #:	[✓ 1]	1	1	1	1	1

NZ 08
AR 3
CL 005
CTY 016

Address 1103 KINGSLEY DRIVE
City/Community WESTPORT
Respondent # 005-04

Call Record Sheet

1st Interviewer EVE FIELDER ID# 14 # Calls 1
2nd Interviewer NED LEVINE ID# 20 # Calls 1

DATE	DAY OF WEEK	TIME	RESULT (CODE EVERY CALL)
1) 6/5/78	Monday	3^{00} am [✓ pm]	82
2) 6/9/78	Friday	2^{00} am [✓ pm]	Appt made by phone responding to letter sent 03
3) 6/10/78	Saturday	1^{00} am [✓ pm]	90
4)		am pm	
5)		am pm	

RESULT:

no one home/no answer – 01	respondent ill – no appointment – 07
respondent not at home – 02	appt. cancelled by initial contact – 08
appointment made – 03 – WRITE TIME/DATE	appt. cancelled by respondent – 09
initial contact busy – no appointment – 04	non-interview – 82
respondent busy – no appointment – 05	completed on appointment – 90
initial contact ill – no appointment – 06	completed no appointment – 91

	DATE	INITIAL
LOGGED OUT	6/1	PB
LOGGED IN/TO EDITING	6/12	PB
EDITING COMPLETE		
SELECTED FOR VALIDATION		
VALIDATION COMPLETE		

	DATE	INITIAL
LOGGED BY CODING		
CLOSED-ENDED CODING COMPLETE		
QUALITY CONTROL OF CLOSED-ENDED CODING		
OPEN-ENDED CODING COMPLETE		
QUALITY CONTROL OF OPEN-ENDED CODING		

Letter sent on 6/6 PB

	DATE	INITIAL
FINAL CHECK		

START CARD 1

ID#

1	2	3	4	5
0	0	5	0	4

CARD: (6 7) 0 1

NZ: (8 9)

AR: (10)

CL: (11 12 13)

CTY: (14 15 16)

SELECTION LABEL #: (17 18)

CALLS: (19)

INTERVIEW DATE: (20 21)

①

II

CONFIDENTIAL

FOR NON-INTERVIEWS ONLY

FIRST INTERVIEWER

A.

Vacant	01
Address not a dwelling	02
No such address	03
No one at home, final call	04
Respondent not at home, final call	05
Language barrier	06
(What language? ______)	
Secure residence	07
Secure apartment building	08
Manager refuses	09
Initial contact incapable	10
WHY?: ______	
Initial contact refused	[✓ 20]
WHY?: She's an older lady. I think she was frightened!	
Respondent incapable	30
WHY?: ______	
Respondent refused	40
VERBATIM: ______	
Refused to open door	50
COMMENTS: ______	
Other	60
SPECIFY: ______	

SECOND INTERVIEWER

E.

Vacant	01
Address not a dwelling	02
No such address	03
No one at home, final call	04
Respondent not at home, final call	05
Language barrier	06
(What language? ______)	
Secure residence	07
Secure apartment building	08
Manager refuses	09
Initial contact incapable	10
WHY?: ______	
Initial contact refused	20
WHY?: ______	
Respondent incapable	30
WHY?: ______	
Respondent refused	40
VERBATIM: ______	
Refused to open door	50
COMMENTS: ______	
Other	60
SPECIFY: ______	

111

CONFIDENTIAL

FOR NON-INTERVIEWS ONLY

FIRST INTERVIEWER

B. REFUSER

Black, non-Spanish surname	[✓ 1]
Spanish surname	2
Oriental	3
White, non-Spanish surname (not Oriental)	4
Other	5

SPECIFY: ______

C. REFUSER

Male	1
Female	[✓ 2]

D. AGE ESTIMATE OF REFUSER 65-70

COMMENTS: ______

SECOND INTERVIEWER

F. REFUSER

Black, non-Spanish surname	1
Spanish surname	2
Oriental	3
White, non-Spanish surname (not Oriental)	4
Other	5

SPECIFY: ______

G. REFUSER

Male	1
Female	2

H. AGE ESTIMATE OF REFUSER ______

COMMENTS: ______

THIS PAGE INTENTIONALLY LEFT BLANK

①

A1. RESPONDENT ID # 005-04

A2. INTERVIEWER: Ned Levine ID # 20

DOORSTEP INTRODUCTION (IN YOUR OWN WORDS)

Good Morning/Afternoon/Evening. I'm (........), a representative of (........ YOUR ORGANIZATION). (SHOW IDENTIFICATION)

We're taking a public opinion study in this area concerning the environment and its impact upon the community. Your house has been selected at random from among those around here. By interviewing select individuals, we can be sure we have scientifically represented the attitudes and opinions of the community. The more people who cooperate, the more successful we can be in representing all the people in this city.

I'd like to take a few minutes of your time and ask you a few questions. On the basis of these questions, a respondent will be scientifically selected to be interviewed. The actual interview will then take approximately 20 to 30 minutes. We feel that you will find our questions interesting. Everything you tell us will be strictly confidential. Your name will not be connected in any way with the findings of this very important study. This interview will be combined with others in the sample to give information about the community as a whole.

In this way, valuable information about the environment will be gathered which will help improve the quality of future city planning.

①

ROSTER FOR RESPONDENT SELECTION

I would like to make a list of the persons 18 years or over who live here as permanent members of your household. This will tell me which adult I am to interview.

A3. Starting with the oldest male, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT MALES HAVE BEEN LISTED.)

Now, taking the oldest female, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT FEMALES HAVE BEEN LISTED.)

COMPLETE COLUMNS B-D FOR EACH MENTION. IN COLUMN E, STARTING WITH THE FIRST PERSON LISTED, NUMBER ALL THOSE LISTED IN CONSECUTIVE ORDER (1,2,3,...ETC.). LOOK AT SELECTION TABLE ON FIRST PAGE TO DETERMINE WHICH NUMBER PERSON IS THE RESPONDENT. CIRCLE THE RESPONDENT'S NUMBER IN COLUMN E.

A First Name	B Is this (...)'s Permanent Residence?		C Sex		D Age on Last Birthday	E Number and Circle # Selected
	Yes	No	Male	Female		
1) agnes	[✓ 1]	2	1	[✓ 2]	67	[✓ 1]
2)	1	2	1	2		
3)	1	2	1	2		
4)	1	2	1	2		
5)	1	2	1	2		
6)	1	2	1	2		
7)	1	2	1	2		
8)	1	2	1	2		

IF NOT PERMANENT RESIDENCE, REMOVE (...) FROM ROSTER. RELIST MEMBERS IN ORDER (DO NOT SKIP A LINE NUMBER).

IF NO ONE IS A PERMANENT RESIDENT AT THIS ADDRESS, HOUSEHOLD BECOMES UNQUALIFIED.

TOTAL # ON LIST: 22 ☐

FOR R ONLY

R # ON LIST: 23 ☐

SEX OF R: 24 ☐

AGE OF R: 25 ☐ 26 ☐

END CARD 1

(YOU WILL NOW KNOW WHICH ADULT IN THE HOUSEHOLD YOU ARE TO INTERVIEW. IF THAT PERSON TO BE INTERVIEWED IS THE SAME PERSON AS THE "INITIAL CONTACT" YOU ARE ALREADY TALKING TO, ASK QUESTION A4. IF IT IS NOT THE SAME PERSON, ASK QUESTION A5.)

A4. **In checking my sampling table, I see that you are the person I am supposed to interview in this household.**

GO TO PAGE 1 AND START QUESTION 1.

A5. **In checking my sample table, I see that I must interview (.....), who is (male/female), and who is (AGE). Is (he/she) available now to be interviewed?**

(IF RESPONDENT IS AVAILABLE, MEET THE PERSON AND REPEAT INTRODUCTION ON PAGE iv.) IF NOT AVAILABLE, DETERMINE BEST TIME TO MEET WITH RESPONDENT.

You have been selected from a sampling table to be interviewed.

GO TO PAGE 1 AND START QUESTION 1.

A6. TIME BEGINNING: 1 10 AM [✓ PM]

1. How long have you lived in this area at your present address or within a few blocks of this address?

ENTER ACTUAL NUMBER OF YEARS, ROUNDED TO NEAREST YEAR (1/2-YEAR OR MORE ROUNDED UP). IF "ALL MY LIFE" OR "LESS THAN 6 MONTHS," CODE BELOW.

RECORD YEARS: __________

LESS THAN 6 MONTHS 95

ALL MY LIFE
(REGARDLESS OF HOW LONG). . . . . [✓ 90]

2. How would you rate the area in which you live? Would you say it was:

Very Good, ... 5
Good, ... 4
Fair, ... [✓ 3]
Poor, or 2
Very Poor? 1

3. Now, thinking of your area, what three things do you particularly like about this area; that is, within a few blocks of here?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION I can use the buses to get around.
2nd MENTION The stores are close by.
3rd MENTION ——

4. What are the three most important problems facing the residents of your area today?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION There are too many burglaries.
2nd MENTION The streets aren't kept up.
3rd MENTION The airplanes make too much noise.

(2)

START CARD 2

ID#

1	2	3	4	5
0	0	5	0	[illegible]

	6	7
CARD:	0	2

Q1: 8 9 ☐☐

Q2: 10 ☐

Q3:
1st: 11 12 ☐☐
2nd: 13 14 ☐☐
3rd: 15 16 ☐☐

Q4:
1st: 17 18 19 ☐☐☐
2nd: 20 21 22 ☐☐☐
3rd: 23 24 25 ☐☐☐

②

5. As I read the following list, would you tell me whether any of these are problems here in this area? Please answer "Yes" or "No".

READ (a–h). CIRCLE APPROPRIATE CODE IN COLUMN A.

(We will be using cards to identify your answers to various questions. Each card is numbered at the top right-hand corner. Please do not turn the cards until I tell you to do so.)

FOR EACH "YES" IN COLUMN A, ASK: Please turn to Card #5. How severe a problem is (...)? INSERT EACH PROBLEM WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Would you say that (...) is a Problem?	YES	NO	EXTREMELY SEVERE	QUITE SEVERE	MODERATELY SEVERE	NOT VERY SEVERE	DON'T KNOW
a. Traffic Congestion?	[✓ Y]	N	5	[✓ 4]	3	2	8
b. Polluted Water?	Y	[✓ N]	5	4	3	2	8
c. Noise?	[✓ Y]	N	5	[✓ 4]	3	2	8
d. Crime?	[✓ Y]	N	[✓ 5]	4	3	2	8
e. Run-Down Areas in Need of Improvement?	[✓ Y]	N	5	4	[✓ 3]	2	8
f. Unclean Air?	Y	[✓ N]	5	4	3	2	8
g. Parking?	[✓ Y]	N	5	4	[✓ 3]	2	8
h. Inadequate Low-Income Housing?	[✓ Y]	N	5	4	3	[✓ 2]	8

Q5:

a:	26 ☐
b:	27 ☐
c:	28 ☐
d:	29 ☐
e:	30 ☐
f:	31 ☐
g:	32 ☐
h:	33 ☐

②

6. Please look at card #6. As I read the following, please tell me how you would rate each of the local public services in this area?

READ (a-k). CIRCLE APPROPRIATE CODE.

How Would You Rate:	VERY GOOD	GOOD	FAIR	POOR	VERY POOR	DON'T KNOW/ DOESN'T APPLY
a. Quality of Schools?	5	4	3	2	1	[✓ 8]
b. Police Protection?	5	4	[✓ 3]	2	1	8
c. Fire Protection?	5	[✓ 4]	3	2	1	8
d. Recreation Facilities?	5	4	3	2	1	[✓ 8]
e. Garbage Collection?	5	[✓ 4]	3	2	1	8
f. Hospitals and Health Facilities?	5	4	[✓ 3]	2	1	8
g. Public Transportation?	5	[✓ 4]	3	2	1	8
h. Street Maintenance?	5	4	3	[✓ 2]	1	8
i. Sewage and Drainage?	5	4	3	2	1	8
j. General Pollution Control?	5	4	3	2	1	[✓ 8]
k. Noise Control?	5	4	3	2	1	[✓ 8]

I'd like to ask you a question about your health. This will allow us to better understand your answers to the remaining questions.

7. How would you rate your health overall? Would you say that your health is:

Very Good, ...5
Good, ...4
Average, ... [✓ 3]
Poor, or 2
Very Poor? 1

Q6:
a: 34 ☐
b: 35 ☐
c: 36 ☐
d: 37 ☐
e: 38 ☐
f: 39 ☐
g: 40 ☐
h: 41 ☐
i: 42 ☐
j: 43 ☐
k: 44 ☐

Q7:
45 ☐

②

Now, in the following questions I will be asking you about the quietness of this area; that is, within a few blocks or so.

8. Please turn to card #8. Looking at the card, please tell me how quiet or noisy you consider this area to be?

Q8: 46 ☐

VERY QUIET 4

QUIET 3

NOISY 2

VERY NOISY . . . . [✓ 1]

Please turn to card #9. As you can see at the top of this card, we have defined the word annoyed as meaning: to be disturbed, stressed, or upset by the repeated occurrence of noise. There is then a scale of annoyance, showing the amount of annoyance from Most to Least.

9. Now, using this card, please tell me which one of these best describes how annoyed you are by noise in this area?

Q9: 47 ☐

TREMENDOUSLY ANNOYED 1

HIGHLY ANNOYED . . . . [✓ 2]

CONSIDERABLY ANNOYED 3

MEDIUM ANNOYED 4

PARTIALLY ANNOYED. 5

A LITTLE ANNOYED 6

NOT AT ALL ANNOYED 7

②

10. Does noise interfere with any of the following activities? Please answer "Yes" or "No." READ (a–d). CIRCLE APPROPRIATE CODE IN COLUMN A.

FOR EACH "YES," READ ACTIVITY AND ASK: Please turn to card #10. How often does it interfere with (...)? INSERT EACH ACTIVITY WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Does Noise Interfere with:	YES	NO	ALWAYS INTERFERES	FREQUENTLY INTERFERES	SOMETIMES INTERFERES	RARELY INTERFERES	DON'T KNOW
a. Sleeping?	[✓ Y]	N	5	[✓ 4]	3	2	8
b. Talking or Listening to the Radio, Watching TV, etc?	Y	[✓ N]	5	4	3	2	8
c. Reading?	[✓ Y]	N	5	4	[✓ 3]	2	8
d. Resting?	[✓ Y]	N	5	4	3	[✓ 2]	8

Q10:

a: 48 ☐

b: 49 ☐

c: 50 ☐

d: 51 ☐

11. Please turn to card #11. During which of these time periods does noise annoy you most? CIRCLE ALL MENTIONS.

a. MORNING (7AM TO NOON) 1
b. AFTERNOON (NOON TO 6PM) 1
c. EVENING (6PM TO 10PM) 1
d. NIGHTTIME (10PM TO 7AM) 1
e. ALL THE TIME . . . . [✓ 1]
f. NOISE NEVER ANNOYS ME 1

Q11:

a: 52 ☐

b: 53 ☐

c: 54 ☐

d: 55 ☐

e: 56 ☐

f: 57 ☐

②

12. Generally speaking, do you think noise affects your physical or emotional health and well-being?

YES 3
NO 1
MAYBE . . . . [✓ 2]

Q12: 58 ☐

13. Does noise affect your health in any of the following ways? Please answer "Yes" or "No." READ (a-e). CIRCLE APPROPRIATE CODE IN COLUMN A.

FOR EACH "YES," READ SYMPTOM AND ASK: Please turn to card #13. How often does noise cause (...)? INSERT EACH SYMPTOM WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Does Noise Cause:	YES	NO	ALL THE TIME	FREQUENTLY	SOMETIMES	RARELY	DON'T KNOW
a. Headaches?	Y	[✓ N]	5	4	3	2	8
b. Tiredness?	Y	[✓ N]	5	4	3	2	8
c. Irritability?	Y	[✓ N]	5	4	3	2	8
d. Hearing Loss or Difficulties?	Y	N	5	4	3	2	[✓ 8]
e. An Existing Health Problem to Get Worse?	[✓ Y]	N	5	4	[✓ 3]	2	8

Q13:
a: 59 ☐
b: 60 ☐
c: 61 ☐
d: 62 ☐
e: 63 ☐

14. Please turn to card #14. To what extent have you become accustomed to noise?

HIGHLY ACCUSTOMED 5
QUITE ACCUSTOMED 4
MEDIUM ACCUSTOMED . . . . . . [✓ .3]
NOT VERY ACCUSTOMED 2
NOT AT ALL ACCUSTOMED 1

Q14: 64 ☐

[✓ 2]

15. Please turn to card #15. To reduce noise in your home, have you or any member of your household taken any of these actions?

CIRCLE ALL MENTIONS.

- a. USE INSULATION OR SOUNDPROOFING 1
- b. CLOSE DOORS OR WINDOWS . . . . [✓ 1]
- c. TURN-ON OR TURN-UP RADIO, TV, OR STEREO TO MASK NOISE . . . . [✓ 1]
- d. WEAR EARPLUGS 1
- e. CHANGE LOCATION OF SLEEPING QUARTERS . . . [✓ 1]
- f. CONSIDERED MOVING . . . . [✓ 1]
- g. NONE OF THESE 1

16. Please tell me whether you or any member of your household have done any of these things to help reduce noise in this area? Please answer "Yes" or "no."

	YES	NO
a. Complaining to a Neighbor About Making Too Much Noise?	[✓ 1]	0
b. Writing, Telephoning, or Visiting an Official?	[✓ 1]	0
c. Initiating Legal Action?	1	[✓ 0]

Q15:

a: 65 ☐

b: 66 ☐

c: 67 ☐

d: 68 ☐

e: 69 ☐

f: 70 ☐

g: 71 ☐

Q16:

a: 72 ☐

b: 73 ☐

c: 74 ☐

END CARD 2

③

START CARD 3

ID#

1	2	3	4	5
0	0	5	0	[illegible]

CARD:

6	7
0	3

Now I'd like to explore some specific noise sources that may or may not annoy you in this area.

17. Please turn to card #17. As I read the following list of noise sources, tell me how annoyed you are by each noise source in this area.

READ (a–u). CIRCLE APPROPRIATE CODE.

How Annoyed are You by Noise from (...)?	TREMENDOUSLY ANNOYED	HIGHLY ANNOYED	CONSIDERABLY ANNOYED	MEDIUM ANNOYED	PARTIALLY ANNOYED	A LITTLE ANNOYED	NOT AT ALL ANNOYED
a. Traffic?	1	[✓ 2]	3	4	5	6	7
b. Motorcycles?	1	2	3	[✓ 4]	5	6	7
c. Trucks?	1	2	[✓ 3]	4	5	6	7
d. Buses?	1	[✓ 2]	3	4	5	6	7
e. Automobiles?	1	2	3	[✓ 4]	5	6	7
f. Highways or Freeways?	1	2	[✓ 3]	4	5	6	7
g. Recreational Vehicles (e.g., Snowmobiles?)	1	2	3	4	5	6	[✓ 7]
h. Garbage Trucks?	1	2	3	[✓ 4]	5	6	7
i. Emergency Vehicles/ Sirens?	1	[✓ 2]	3	4	5	6	7
j. Entertainment Centers (e.g., clubs, movies, places that play live music)?	1	2	3	4	5	[✓ 6]	7
k. Pets/Animals?	1	[✓ 2]	3	4	5	6	7
l. Neighbors' Homes (e.g., noisy stereo, loud talking)?	1	[✓ 2]	3	4	5	6	7
m. Air Conditioners?	1	2	3	4	[✓ 5]	6	7
n. Lawnmowers/ Garden Equipment?	1	2	3	4	5	[✓ 6]	7
o. Jet Airplanes?	1	2	[✓ 3]	4	5	6	7

Q17:

a:	8 ☐
b:	9 ☐
c:	10 ☐
d:	11 ☐
e:	12 ☐
f:	13 ☐
g:	14 ☐
h:	15 ☐
i:	16 ☐
j:	17 ☐
k:	18 ☐
l:	19 ☐
m:	20 ☐
n:	21 ☐
o:	22 ☐

→ QUESTION 17 CONTINUES ON NEXT PAGE.

③

17. (Continued)

How Annoyed are You by Noise from (...)?	TREMENDOUSLY ANNOYED	HIGHLY ANNOYED	CONSIDERABLY ANNOYED	MEDIUM ANNOYED	PARTIALLY ANNOYED	A LITTLE ANNOYED	NOT AT ALL ANNOYED
p. Small Airplanes?	1	2	3	4	[✓ 5]	6	7
q. Helicopters?	1	2	3	[✓ 4]	5	6	7
r. Trains?	1	2	3	4	5	6	[✓ 7]
s. Construction Noise?	1	2	3	4	[✓ 5]	6	7
t. Commercial or Industrial Equipment?	1	2	3	4	5	6	[✓ 7]

u. What Other Noise Sources Annoy You?

- NONE -

First Mention

Second Mention

Q17:
p: 23 ☐
q: 24 ☐
r: 25 ☐
s: 26 ☐
t: 27 ☐
u:
1st: 28 29 ☐☐
2nd: 30 31 ☐☐

③

Now I'd like to ask you some questions about reducing noise in this area.

18. Please turn to card #18. Which of the following should be responsible for reducing noise in this area?

CIRCLE ALL MENTIONS.

a. MANUFACTURER	1
b. OPERATOR/OWNER	1
c. LOCAL GOVERNMENT (includes police, local noise control office, any other local administrative office)	1
d. STATE GOVERNMENT	1
e. FEDERAL GOVERNMENT	1
f. NONE	1

Q18:

a:	32	☐
b:	33	☐
c:	34	☐
d:	35	☐
e:	36	☐
f:	37	☐

19. Do you think this community should have a noise control program to specifically work on reducing noise levels? This program would be funded by the community.

YES	SKIP TO Q20	2
NO	ASK Q19A.	1

Q19: 38 ☐

19A. Please turn to card #19. Why do you feel that there should not be a noise control program in this community?

CIRCLE APPROPRIATE CODE.

	MENTIONED	NOT MENTIONED
a. I DON'T THINK ANYTHING CAN BE DONE	1	2
b. I DON'T CARE; I'M NOT BOTHERED ENOUGH	1	2
c. IT IS NOT THE RESPONSIBILITY OF THE COMMUNITY	1	2
d. IT IS TOO COSTLY	1	2

Q19A:

a:	39	☐
b:	40	☐
c:	41	☐
d:	42	☐

(TO PRECEDE Q20):

NOT TO BE INCLUDED IN PRINTED QUESTIONNAIRE

NOTE TO RESEARCHERS: FOR Q20, YOU MUST TYPE THE ACTUAL COST TO YOUR CITY IN THE APPROPRIATE SPACE. FOR a. YOU MULTIPLY $0.10 TIMES THE POPULATION SIZE OF YOUR CITY. FOR b. YOU MULTIPLY $0.25 TIMES THE POPULATION SIZE OF YOUR CITY. FOR c. YOU MULTIPLY $0.50 TIMES THE POPULATION SIZE OF YOUR CITY. FOR d. YOU MULTIPLY $1.00 TIMES THE POPULATION SIZE OF YOUR CITY. FOR e. YOU MULTIPLY $2.50 TIMES THE POPULATION SIZE OF YOUR CITY. FOR f. YOU TAKE THE FIGURE FOR e. AND TYPE IT AFTER "MORE THAN________."

③

0. Please turn to card #20. Keeping in mind your present level of taxes, how much in additional taxes would you be willing to pay on a yearly basis for a noise control program?

This card shows how much it will cost your city as a whole and how much it will cost each individual in the city.

How much would you be willing to pay in additional taxes for a noise control program?

Q20:

43 ☐

ADDITIONAL TAXES

COST TO CITY	COST TO INDIVIDUAL	
	(OR APPROXIMATELY 10¢ FOR EACH INDIVIDUAL A YEAR)	1
	(OR APPROXIMATELY 25¢ FOR EACH INDIVIDUAL A YEAR)	2
	(OR APPROXIMATELY 50¢ FOR EACH INDIVIDUAL A YEAR)	[✓ 3]
	(OR APPROXIMATELY $1.00 FOR EACH INDIVIDUAL A YEAR)	4
	(OR APPROXIMATELY $2.50 FOR EACH INDIVIDUAL A YEAR)	5
MORE THAN ____________	(OR MORE THAN $2.50 FOR EACH INDIVIDUAL A YEAR)	6
I WOULD NOT PAY ANY EXTRA TAXES FOR A NOISE CONTROL PROGRAM		7

③

21. If there were a noise control program funded by your community, which of the following suggestions would you support for community noise control? Please answer "Yes" or "No" after each suggestion is described.

READ (a-h). CODE IN APPROPRIATE COLUMN.

			DO NOT READ
Would you support:	**YES**	**NO**	**DON'T KNOW**
a. Making Noise Sources Quieter — for example, equipment manufacturers would be required to supply quieter products if economically possible.	[✓ 1]	0	8
b. Community Planning and Zoning — for example, industries or highways producing excessive noise would not be allowed to locate near residential areas.	1	0	[✓ 8]
c. Building Codes — for example, new buildings would have to be constructed to reduce interior noise levels.	[✓ 1]	0	8
d. Curfews — for example, work on a construction site would not be permitted in the nighttime or very early morning hours.	[✓ 1]	0	8
e. Fines for Making Too Much Noise — for example, people with automobiles and other vehicles having noisy mufflers would be fined.	[✓ 1]	0	8
f. Barriers — for example, barriers might be installed between a highway and densely-populated areas.	1	0	[✓ 8]
g. Traffic Planning — for example, traffic would be re-routed away from residential areas.	[✓ 1]	0	8
h. Public Information Campaign — for example, a program to inform citizens about noise control would be started.	[✓ 1]	0	8

Q21:

a:	44	☐
b:	45	☐
c:	46	☐
d:	47	☐
e:	48	☐
f:	49	☐
g:	50	☐
h:	51	☐

END CARD 3

④

START CARD 4

ID#

1	2	3	4	5
0	0	5	0	4

	6	7
CARD:	0	4
	8	9
Q22:		
	10	11
Q23:		
	12	13
Q24A:		

Now, I'd like to ask you a few final questions about your background.

22. What was the month and year of your birth?

MONTH: February YEAR: 1911

23. What was the highest grade in school you completed and received credit for? CIRCLE ONE.

00 01 02 03 04 05 06 07 08 09 10 11 [✓ 12]

COLLEGE/OTHER POST HIGH SCHOOL SCHOOLING: 13 14 15 16

POST GRADUATE SCHOOL: 17 18 19 20 OR MORE

24. Have you ever worked?

NO . . . . SKIP TO Q26 80
YES . . . . ASK A. . . . . [✓ X]

A. Please turn to card #24. What is your present employment status?

WORKING FULL-TIME 01
WORKING PART-TIME 02
UNEMPLOYED 03
RETIRED . . . . [✓ 04]
KEEPING HOUSE 05
IN SCHOOL 06
SOMETHING ELSE 07

SPECIFY: ______________________________

CONTINUE WITH Q25, Q25A

④

25. What kind of work do (did) you do? What is (was) your main occupation?

(EXAMPLES: ELECTRICAL ENGINEER, SHOE CLERK, JANITOR, TEACHER)

Postal worker in local post office. I sorted the mail and waited on people.

Q25:

Q25A:

14	15
☐	☐

25A. What kind of business, industry, or organization is (was) that in? What do (did) they do or make?

(EXAMPLES: TV MANUFACTURER, RETAIL SHOE STORE, STATE LABOR DEPARTMENT)

Is (was) it wholesale, retail, manufacturing, or what?

For the Federal Government

④

26. Please turn to card #26. Now, thinking of your entire family, all those related to you in this household, look at the card and tell me the letter of the income group that includes the total income for your family, from all sources, before taxes for last year. Please include your (and your spouse's) income. Do not include unrelated people.

IF UNCERTAIN, ASK: What would be your best guess?

AFTER INITIAL RESPONSE, ASK: Does that include everyone in your family who lives here? Is that before taxes or any deductions?

A.	01
B.	02
C.	03
D.	04
E.	05
F.	06
G.	07
H.	08
I.	09
J.	10
DON'T KNOW	98
REFUSED	[✓ 99]

Q26:

16	17

Refused to Answer

"I don't think I should tell you. You might be from the tax office."

Me: "I guarantee this information will be confidential."

- Still - I'd rather not."

④

27. Please turn to card #27. Tell me which one of these best describes your racial background or heritage?

IF R CHOOSES MORE THAN ONE, PROBE FOR MAIN ONE.

a. WHITE/ANGLO/EUROPEAN 1

b. BLACK/NEGRO/AFRO-AMERICAN . . . . [✓ 2]

c. HISPANIC/LATIN AMERICAN/ SPANISH-PORTUGUESE HERITAGE 3

d. ASIAN/PACIFIC ISLANDER/ ASIAN-AMERICAN 4

e. NATIVE AMERICAN/AMERICAN INDIAN/ ALASKAN NATIVE 5

f. MIDDLE EASTERN/ARAB/NORTH AFRICAN 6

g. OTHER 7

SPECIFY: ______________________

Q27: 18 ☐

④

28. Please turn to card #28. Do you (or does your family) own this house (apartment)? Do you pay rent, or what?

Q28:

19 ☐

HOUSE OWNED BY ME OR MY FAMILY (OR BEING BOUGHT NOW) 4

APARTMENT OR CONDOMINIUM OWNED BY ME OR MY FAMILY (OR BEING BOUGHT NOW) 3

HOUSE OR APARTMENT RENTED . . . . [✓ 2]

NEITHER OWN RESIDENCE NOR PAY RENT 1

29. Including yourself, and including all children, how many people usually live in this house (apartment)?

Q29:

20	21

RECORD #: 1

So my supervisor can verify that I completed this interview, please tell me your name and your phone number:

Name: Agnes Moore

Telephone Number: 926-3604

I would like to thank you on behalf of (NAME OF SPONSORING ORGANIZATION) for taking the trouble to provide us some very valuable information.

****

END OF INTERVIEW

****

A. TIME INTERVIEW ENDED: 1 45 AM [✓ PM]

TOTAL # OF MINUTES: 30
(= A - B - C)

B. TIME INTERVIEW BEGAN: 1 20 AM [✓ PM]
(Refer to page vii)

C. INTERRUPTION: # OF MINUTES: 5

CONFIDENTIAL

FILL IN THE FOLLOWING ITEMS IMMEDIATELY AFTER LEAVING RESPONDENT'S HOME:

B1. Respondent Was:

Male	1
Female	[✓ 2]

B2. Building Capacity:

A One-Family House Detached from Any Other House	1
A One-Family House Attached to One or More Houses	2
A Building for Two Families or Duplex	3
A Building for Three or Four Families	4
A Building for Five to Nine Families	[✓ 5]
A Building for 10 to 19 Families	6
A Building for 20 or More Families	7
A Mobile Home or Trailer	8
Other	9

SPECIFY: ____________

B3. Building Orientation:

Estimate Distance from Dwelling to Street (in feet): 45 Feet

B4. Construction Type:

Masonry	1
Wood Frame	[✓ 2]

B5. Sex of Interviewer:

Male	[✓ 1]
Female	2

B6. Language of Interview:

English	[✓ 1]
Spanish	2
Other	3

SPECIFY: ____________

④

TIME: 22 ☐ 23 ☐

B1: 24 ☐

B2: 25 ☐

B3: 26 ☐ 27 ☐ 28 ☐

B4: 29 ☐

B5: 30 ☐

B6: 31 ☐

END CARD 4

APPENDIX H

Field Management Materials

	Interviewer Application
FORM J	Field Log Sheet
FORM K	Interviewer Log Sheet
FORM L	Validation Interview
FORM M	Coding Log Sheet

(Your Organization's Letterhead)

INTERVIEWER APPLICATION

PLEASE PRINT OR TYPE

Name Mr. Mrs. Miss Ms. ______________________________

Home Address ______________________________ Zip Code

Telephone No. ____________ Social Security No. ____________

Month and Year of Birth ____________ Are You a Citizen of the U.S.? Yes____ No____

Marital Status Married____ Widowed____ Separated____ Divorced____ Never Married____

Name and permanent address of person to be notified in case of accident or emergency:

____

____

Starting with the oldest male, please list all males living in your household at the present time, giving also their age and relationship to you. List from oldest to youngest. Now, starting with the oldest female, please list all females living in your household at the present time, giving also their age and relationship to you. List from oldest to youngest.

Name	Age	Relationship

What was the highest grade in school you completed and received credit for? CIRCLE ONE:

01 02 03 04 05 06 07 08 09 10 11 12

COLLEGE/OTHER POST HIGH SCHOOL SCHOOLING: 13 14 15 16

POST GRADUATE SCHOOL: 17 18 19 20 OR MORE

If any degree received, please specify: ______________________________

Are you working now? Yes_____ No_____ IF YES: Hours you work: ____________________

Company you are employed by: ____________________

Position: ____________________ Hourly Pay: ____________________

Are you attending school now? Yes_____ No_____ IF YES: School Attending: ____________________

Present Schedule: ____________________

Do you have a car available for interviewing? At All Times_____ Sometimes_____ Never_____

IF AVAILABLE CAR: License Plate No. ____________________

Do you have a valid Driver's License? Yes_____ No_____ IF YES. Driver's License No. ____________________

Is your car insured? ____________________ Name of Insurance Company ____________________

Are you available to do interviewing: Evenings_____ weekends_____ and daytime hours? __________

If not available all hours, please specify available time:

____

How many days a week will you be available for interviewing? No. of Days: __________

On the average, how many hours a week will you be available to do interviewing: No. of Hours Available: __________

Do you have any chronic illness or handicap? Yes_____ No_____

IF YES: Please explain: ____________________

IF YES: Will this affect your capacity as an interviewer? ____________________

Do you speak and read a foreign language fluently? Yes_____ No_____

IF YES: Please list which language(s): ____________________

Where did you hear about this survey? ____________________

Have you had any experience in interviewing? Yes_____ No_____ IF YES: Whom did you work for?

	NAME OF COMPANY	DATES WORKED (most recent first)
1)		
2)		
3)		

(continue overleaf if necessary)

IF YES: Type of Interviewing: Telephone? Yes_____ No_____ Face-to-Face (in person)? Yes_____ No_____

Do you have: Typing Skills? Yes_____ No_____

Coding Skills? Yes_____ No_____

Other? SPECIFY ____________________

PREVIOUS EMPLOYMENT - Include Interviewing Employment

Inclusive Dates					
From	To	Name of Company	Supervisor	Position	Hourly Pay Rate

Please indicate main cross streets nearest your home address:

____

____

Signature (sign in ink) ____________________________

Date ______________________

FORM J

FIELD LOG SHEET

Page _____ of _____

Cluster # _________

Respondent ID #	Date Assigned	Interviewer ID #	Date Returned	Result: C/N

INTERVIEWER LOG SHEET

Page _____ of _____

Interviewer ______________________ ID# __________

Cluster #	Respondent ID #	Date Assigned	Date Returned	Number of Calls	Result: C/N

FORM L

CONFIDENTIAL

VALIDATION INTERVIEW

VERIFIED ID# __________

TIME BEGINNING: __________ AM PM

Community Environment Questionnaire

RESPONDENT ID# __________

RESPONDENT: __________ PHONE: __________

ADDRESS: __________ CLUSTER # __________

INTERVIEWER: __________ INTERVIEWER ID # __________

INTERVIEW DATE: __________ INTERVIEW TIME __________ AM PM

Date	Day	Time	Telephone	Person Contacted	Respondent Contacted	Outcome (record each contact and attempt for validation)
		AM PM				
		AM PM				
		AM PM				
		AM PM				

Total # of Telephone Calls: __________

General Result:

Interview was:
- Completed . . 1
- Not Completed . 2
- Refused . . . 3

Number of Reconciled Differences: __________

Number of Unreconciled Differences: __________

Comments: __________

CONFIDENTIAL

1. Hello, may I please speak to ______________________;
I'm ______________________, from (YOUR ORGANIZATION). Recently
you were interviewed by ______________________ (NAME OF INTERVIEWER).

I need your help on a few items from your interview and then I would like you to tell me what you thought about it.

2. About how long would you say it took?

ORIGINAL INTERVIEW	VALIDATION INTERVIEW
Minutes/Hours: __________	Minutes/Hours: __________
TIME TOTAL AGREES:	Yes 1
	No . Explain Below. . 2

EXPLAIN: ______________________________________

____

____

3. Your address is ______________________, Apt. # ______
in ______________________, is that correct? (We scientifically sample residents of this city and it is important the interviewer went to the correct address).

Yes 1
No 2

4. We want to be sure that we did not miss any people who were living in your household at the time of the interview. Would you please give me the names of everyone 18 years old or over who was living in your household at the time of the interview (AGE AT TIME OF INTERVIEW).

ORIGINAL INTERVIEW			VALIDATION INTERVIEW		
Name	Age	Sex	Name	Age	Sex
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					

(continue if necessary)

Total Listed Agrees: Yes 1
No 2

Sex Agrees: Yes 1
No 2

Age Agrees: Yes 1
No 2

Correct Respondent: Yes 1
No 2

5. How long have you lived in this area, at your present address or within a few blocks of that address?

ORIGINAL INTERVIEW	VALIDATION INTERVIEW
________________	________________

Agrees:
Yes 1
No 2

6. What was the highest grade in school you completed and received credit for?

ORIGINAL INTERVIEW	VALIDATION INTERVIEW
________________	________________

Agrees:
Yes 1
No . Explain Below. . 2

EXPLAIN: ____

____

7. Did the interviewer show you a card, from a book of cards, listing various income groups?

Yes 1
No . ASK A . . . 2

A. (IF "NO") Were you asked any questions about your income?

Yes 1
No 2

EXPLAIN: (IF ANY EXPLANATION GIVEN) ________________

____

____

8. What was your employment status at the time of the interview? Were you:

Working Full-Time, ...	1
Working Part-Time, ...	2
Unemployed, ...	3
Retired, ...	4
Keeping House, ...	5
In School, or	6
Something Else?	7

SPECIFY: ______________________

____

ORIGINAL INTERVIEW	VALIDATION INTERVIEW
______________	______________

Agrees:

Yes	1
No	2

9. Thank you so much for your cooperation. Do you have any comments you would like to make about the interview or interviewer?

Comments: ______________________

____

TIME ENDED ______________ AM PM

TOTAL MINUTES ______________

FORM M

CODING LOG SHEET

Page _____ of _____

Cluster # _________

Respondent ID #	Interviewer ID #	Date Logged by Coding

APPENDIX I

Coding Handbook

INSTRUCTIONS FOR CODING QUESTIONNAIRES

The following steps should have been completed before a questionnaire is ready for coding. First, the completed questionnaire should have been registered and logged by the Field Director. Second, it should have been edited and, possibly, validated. Third, it should have been logged in for coding. You can tell whether a questionnaire has gone through these steps by examining the small checklist at the bottom of the first page. If "Logged By Coding" has been checked, then proceed to code the questionnaire. If not, consult your Coding Director.

1.1 General Instructions for Coding

1. Always use a red pencil for coding. NEVER USE A PEN. Be sure your pencil is kept sharp.
2. Always write legibly. A keypunch operator will have to read your handwriting and if it is unreadable, many mistakes will occur.
3. On the right-hand margin of each page of the questionnaire, there are small boxes with numbers written on top and numbers or letters to the left. The boxes are the spaces in which you will write the codes. The numbers on top are the column numbers of the computer cards and the boxes are referred to by their number. For example, a box labeled with a 45 on it is referred to as box 45.

Example:

45
Q7: ☐

The numbers to the left of one or several boxes tell the question or subquestion number. In the above example, box 45 belongs to Q7. YOU SHOULD ALWAYS CODE EACH QUESTION OR SUB-QUESTION IN ITS APPROPRIATE BOX OR BOXES.

4. Every box must be coded and there must be ONE, and only one, number in a box. Pay attention to codes for which two or three boxes are to be used. In the case of a two-digit code (e.g., Q29, a single-digit answer must be preceded by zeros – '0'). For example, if the respondent answered 9 for question 29, then you would code 09 in the appropriate boxes (20 and 21 on card #4). Similarly, for a three-digit code (e.g., CTY or the CL number), you must put zeros before any single-digit or two-digit number when coding into the box. Finally, the ID number is a five-digit number and must be transferred exactly as it is written. If you have any questions, ask your Coding Director.

5. Codes are always numbers (never letters). There are four kinds of codes associated with questions: identifying, counting, closed-ended, and open-ended codes.

   a. Identifying codes identify the respondent and properties of the sample. Each respondent has an identification number, which should already be written in boxes 1, 2, 3, 4 and 5 on page i of the questionnaire where it says "ID #." This identification number must be repeated at the beginning of every new card, in boxes 1 through 5. Every time you encounter these five boxes on each new card, check to see that the identification number is written. In addition, there are identification numbers for sample properties on the first page (the NZ, AR, CL, and CTY codes, covering boxes 8 through 16 on the first card).

   b. Counting codes require you to count something. There are three such items which require this: (1) a count of the number of calls made to the house (page i); (2) a count of the number of minutes that the interview took (page vii and page 18); and (3) a calculation of the respondent's age (Q22, page 13).

Example:

In question 22, the respondent has indicated that he was born in October 1938. Assume that the month and year in which you are coding this questionnaire is, say, March 1979. You would calculate the respondent's age as 40 years and 5 months. Rounding-off to the nearest year would give you 40 years, and you would code 40 in boxes 8 and 9 on card #4.

	8	9
Q22:	4	0

c. Closed-Ended codes are used most often in the questionnaire. There are two kinds of closed-ended numbers: (1) numbers attached to dotted lines; and (2) numbers in squares.

Example:

7. How would you rate your health overall? Would you say that your health is:

Very Good, ... 5
Good, ... 4
Average, ... [✓ 3]
Poor, or 2
Very Poor? 1

In this example, if 3 for "Average" has been circled, you will code a '3' in box 45.

	45
Q7:	3

Example:

Numbers within squares appear whenever there is a list of items. In these cases, one of the numbers will have been circled and you will simply transfer the number to the appropriate box.

6. Please look at card #6. As I read the following, please tell me how you would rate each of the local public services in this area?

READ (a-k). CIRCLE APPROPRIATE CODE.

How Would You Rate:	VERY GOOD	GOOD	FAIR	POOR	VERY POOR	DON'T KNOW/ DOESN'T APPLY
a. Quality of Schools?	[✓ 5]	4	3	2	1	8
b. Police Protection?	5	[✓ 4]	3	2	1	8
c. Fire Protection?	5	4	[✓ 3]	2	1	8
d. Recreation Facilities?	5	4	3	2	[✓ 1]	8
e. Garbage Collection?	5	4	[✓ 3]	2	1	8
f. Hospitals and Health Facilities?	5	[✓ 4]	3	2	1	8
g. Public Transportation?	5	4	3	2	[✓ 1]	8
h. Street Maintenance?	5	4	3	[✓ 2]	1	8
i. Sewage and Drainage?	5	[✓ 4]	3	2	1	8
j. General Pollution Control?	5	4	3	2	1	[✓ 8]
k. Noise Control?	5	4	3	2	1	[✓ 8]

Q6:

a:	34	5
b:	35	4
c:	36	3
d:	37	1
e:	38	3
f:	39	4
g:	40	1
h:	41	2
i:	42	4
j:	43	8
k:	44	8

Some questions (Q5, Q10, Q13) have letters Y - "Yes" or N - "No" (Column A) as well as numbers circled (Column B). If a Y - "Yes," is circled, simply code the circled number in Column B. If an N - "No," is circled, code this as '1'.

Example:

10. Does noise interfere with any of the following activities? Please answer "Yes" or "No." READ (a-d). CIRCLE APPROPRIATE CODE IN COLUMN A.

FOR EACH "YES," READ ACTIVITY AND ASK: Please turn to card #10. How often does it interfere with (...)? INSERT EACH ACTIVITY WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Does Noise Interfere with:	YES	NO	ALWAYS INTERFERES	FREQUENTLY INTERFERES	SOMETIMES INTERFERES	RARELY INTERFERES	DON'T KNOW
a. Sleeping?	[✓ Y]	N	5	[✓ 4]	3	2	8
b. Talking or Listening to the Radio, Watching TV, etc?	Y	[✓ N]	5	4	3	2	8
c. Reading?	Y	[✓ N]	5	4	3	2	8
d. Resting?	[✓ Y]	N	5	4	[✓ 3]	2	8

Q10:

a:	48	4
b:	49	1
c:	50	1
d:	51	3

In this example, "a. Sleeping?" and "d. Resting?" are rated as Y - "Yes." In these cases, the codes in Column B are taken and coded into the appropriate boxes – box 48 for a. and box 51 for d. For "b. Talking or Listening to the Radio, Watching TV, etc.?" and "c. Reading?", since N - "No" is circled, then '1' is coded in the appropriate boxes for these items: box 49 for b. and box 50 for c.

d. Open-Ended codes are used for the write-in questions (Q3, Q4) and for the occupational codes (Q25, Q25A). You will have to learn how to interpret these questions. Special instructions are given for each question to help the interpretation. Take all questions to the Coding Director.

6. Some of the questions allow spaces for a "Don't Know" answer, but most do not; also, there are no spaces allowed for a "Refused" or "No Answer." This is to discourage the interviewers from overusing these categories. Nonetheless, many respondents will refuse to answer or will indicate that they don't know the answer. When this happens, the interviewer will usually write across the question "Refused" or "Don't Know" or words to that effect. In the detailed instructions, you will be given special codes for "Refused," "No Answer," or "Don't Know." Sometimes the interviewer will forget to ask a question. Occasionally, you will find whole pages with missing answers; this might be because the respondent did not want to answer these questions, or else the interviewer accidentally skipped over a couple of pages. Most of these cases should have already been cleared by the editing team. But if it has been approved for coding, then you should code the appropriate code for "No Answer" in the correct box for each question.

7. When you have finished coding the questionnaire, check to be sure that:

   a. ALL boxes have been coded.
   b. There are only numbers inside boxes.
   c. There is ONE, and only one, number per box.

In Section I.2, detailed coding instructions are given for each question in the questionnaire. Don't Guess in your Work! BE SURE TO CHECK YOUR INSTRUCTIONS and if you are in doubt, ask your Coding Director.

Two examples of completed and coded questionnaires are presented in the appendix.

1.2 Detailed Coding Instructions

There are four identifications for each code: the page number of the questionnaire; the card number (the circled number at the top right-hand margin which refers to the computer card on which the numbers will be keypunched); the question number; and the box number(s).

START CARD 1

Page Number	Card Number	Question Number	Box Number(s)	Coding
i	1	ID #	1-5	This is the Respondent's identification number. It should be written on the questionnaire. The number is actually made up of two separate numbers. The first three digits refer to the cluster number and the last two digits refer to the respondent number within the cluster. However, the ID number is always coded as a five-digit number. Every time a new card comes up, boxes 1 through 5 should have this ID #. Write the same number in for each of the four times that the ID number comes up.
i	1	CARD	6-7	This is the card number. It should already be coded – in this case, '01'. This tells the keypunch operator which card it is.
i	1	NZ	8-9	This is the 'NZ' or Noise Zone number. At the top of the page, near the right-hand corner, you will see a square with four codes followed by lines: NZ, AR, CL, and CTY. You should write the number for NZ in boxes 8 and 9. Be sure to code this as a two-digit number. For example, if NZ is 4 or 7, you will code this as '04' or '07'. If it is 10, you will code this as '10', etc.
i	1	AR	10	This is the area number. It is written in space AR in the square at the top of the page. It is a one-digit number.

Page Number	Card Number	Question Number	Box Number(s)	Coding
I	1	CL	11-13	This is the cluster number. Code CL in these three boxes. Be sure to code them as a three-digit number. For example, if the CL number is 100, code this as '100'; if it is 56, code this as '056'; if it is 9, code this as '009' and so forth.
I	1	CTY	14-16	This is the city identification number. Your city should have a special city identification number. All questionnaires belonging to the same city should receive this number. Be sure to code it as a three-digit number. For example, if your city's number is 8, code this as '008', etc.
I	1	SELECTION LABEL #	17-18	This is the Selection Label number. On each questionnaire, there is a selection label pasted on the front page. At the top right-hand corner, there is a table number. Code this number in boxes 17 and 18. Be sure to code it as a two-digit number; for example, if the table is marked TABLE 02, code this as '02'.
I	1	# CALLS	19	This is the number of calls made. Each call made by an interviewer should be recorded in the spaces to the left, numbered 1,2,3,4, and 5. Simply count the number of recorded calls and enter that number in box 19. Note, there may be more than five calls. If there are nine or more calls, code this as '9'.
I	1	INTERVIEW DATE	20-21	This is the interview date number. Your Coding Director should provide you a sheet which gives the numbers for the interview dates. The first day on which interviewers went into the field would be day '01', the second day '02', the third day '03', and so forth. All consecutive days should be included (Sundays, holidays, etc.). The number of days that will be included on the sheet will depend on how long it takes to complete the interviewing. If there are more than 99 days, code as '99'.

Page Number	Card Number	Question Number	Box Number(s)	Coding
ii	1	-	-	There are no coded responses on page ii.
iii	1	-	-	There are no coded responses on page iii.
iv	1	-	-	There are no coded responses on page iv.
v	1	-	-	There are no coded responses on page v.
vi	1	TOTAL # ON LIST	22	Question A3 lists all adults in the household. In box 22, write the total number of persons listed. If there are 9 or more, code '9'.
vi	1	R# ON LIST	23	One of the persons listed should be circled. This is the selected respondent. Write the number of the respondent (which is written in Column E) in box 23.
vi	1	SEX OF R	24	Code the sex of the respondent in box 24. Males are coded as '1' and Females as '2'.
vi	1	AGE OF R	25-26	This is the age of the respondent. In Column D, the age of the selected respondent is listed. On page 13 of the questionnaire, Question 22, the respondent gives his or her age again. The age as reported in Q22 may differ from that reported on page vi. This might happen if one person in the household reported another's age inaccurately. The answer for Q22 should be taken as the correct one. If there is a slight discrepancy, do not worry about it; if there is a large discrepancy, contact the Coding Director. Code the age as given in Q22 in boxes 25 and 26 of page vi. THIS ENDS THE CODING FOR CARD #1
vii	-	-	-	There are no coded responses on page vii. On page 18, you will have to calculate the number of minutes that the interview took, and you will have to use the TIME BEGINNING on page vii.

START CARD 2

Page Number	Card Number	Question Number	Box Number(s)	Coding
1	2	ID #	1-5	Code the respondent's identification number in boxes 1 through 5.
1	2	CARD	6-7	This is the pre-coded card number '02'.
1	2	1	8-9	Record the number of years in boxes 8 and 9. This is a two-digit number; e.g., if R has lived in the area for 6 years, you code '06' in boxes 8 and 9. If "less than 6 months" is circled, code '95' in boxes 8 and 9. If "All My Life" is circled, code '90'. If there is a "Don't Know" written, code '98'. If there is a "Refused" answer, or if there is "No Answer," code '99'.
1	2	2	10	Code the circled number in box 10. "Don't Know" is coded as '8' and "Refused" or "No Answer" as '9'.
1	2	3	11-12 13-14 15-16	This question asks the respondent to mention three things about the area that he or she particularly likes. It is possible that the person will only mention one or two things. It is even possible that the person will not mention anything at all. Space is being allowed for as many as three things about the area that the person likes. The first mention is coded in boxes 11 and 12. The second mention is coded in boxes 13 and 14. The third mention is coded in boxes 15 and 16. Code this question as follows: a. Count the number of mentions that the person has given (0, 1, 2, or 3). If there are more than 3, code only the first three listed.

Page Number	Card Number	Question Number	Box Number(s)	Coding
1	2	3	11–12 13–14 15–16	(Continued)

b. For each characteristic mentioned, code it into one of the categories listed below, using the one which corresponds most closely to the response. DO NOT INTERPRET OR READ ANYTHING INTO THE RESPONDENT'S ANSWER.

c. If the same category comes up twice or three times, code it only once. For example, if the R mentions "Good parks," "Nice trees," and "Fine environment," code this only once as '17'.

d. Fill in all the remaining boxes with zeros — '0'. For example, if the person listed only two characteristics: (1) Close to Work, and (2) Safe Area, code '01' in boxes 11 and 12, '13' in boxes 13 and 14, and '00' in boxes 15 and 16. This shows that there are only two characteristics mentioned.

Code	Category
LOCATIONAL (These are mentions which relate to the location of a particular service, as opposed to the quality: mentions such as "close to," "near to," "easy access to," "easy to get to," "convenient," etc.)	
01	Close to Work
02	Close to Shopping
03	Close to Public Transportation
04	Close to Friends and Relatives
05	Close to Schools
06	Close to Church

Page Number	Card Number	Question Number	Box Number(s)	Coding
1	2	3	11-12 13-14 15-16	(Continued)

Code	Category
07	Close to the Center of the City
08	Close to Entertainment/Recreation
09	Close to Hospitals/Medical Services
10	Close to Good Roads; Easy to get Across Town; Easy to get Out of Town
11	Good General Location and Other Locational Issues (Use this category only if the above categories don't apply. If there is another locational mention which does not fit into the above categories, or if R makes a general or vague mention about location, use this category; miscellaneous locational mentions).

ENVIRONMENT AND HOUSING (These are mentions about the quality of the neighborhood, the housing, or the environment. Use categories 1 through 11 for locational mentions.)

Code	Category
12	Good Neighbors; Friendly Neighbors; Trustworthy Neighbors
13	Safe Area; Lack of Crime
14	Quiet Area
15	Clean City; Lack of Dirt, Litter
16	Clean Air
17	Good Parks
18	Good Natural Environment (e.g., trees, scenery, outdoors)
19	Good Housing; Good Quality Homes (e.g., "Nice neighborhood")
20	Inexpensive – Rents/House Prices/ Apartment Prices
21	Other Environmental or Housing Issue (Use this category if categories 12-20 do not apply)

Page Number	Card Number	Question Number	Box Number(s)	Coding
1	2	3	11-12 13-14 15-16	(Continued)

Code	Category
QUALITY OF SERVICES (These are mentions which refer to the quality of city services, not to their location, closeness or convenience)	
22	Good Schools; Quality of Schools is Good
23	Good Shops or Stores; Good Quality Stores; Variety of Stores; Sufficient Number of Stores
24	Good Churches; Variety of Churches
25	Good Entertainment/Recreation Facilities
26	Good Hospitals; Good Medical Services
27	Good Police Protection
28	Good Fire Protection
29	Good Roads
30	Good Garbage Collection
31	Other Service Issues (Use this category if categories 22-30 do not apply)
OTHER ISSUE (These are mentions which do not fit into any of the above categories)	
32	Other Mention
98	Don't Know
99	Refused or No Answer given because the question was not asked.

Page Number	Card Number	Question Number	Box Number(s)	Coding
1	2	4	17-19 20-22 23-25	This question asks the respondent to mention the three most important problems facing his or her area today. Generally, people will go into more detail when they discuss problems than when they discuss their general likes. Thus, the number of categories needed to code the answer is much greater than for Question 3.

For each problem mentioned, you should consult the general heading first before locating the specific category that best fits what the individual mentioned. DO NOT INTERPRET. Simply fit the person's answers, as closely as possible, into a category. If a mention does not fit, but is within the general heading, code it into the miscellaneous category within each general heading. If a mention does not fit into any of the general headings, code it as '975', which is the "OTHER" category.

Your Coding Director may decide to add some extra categories, in which case you will be provided with the extra codes.

If the respondent did not mention three problems, fill in the remaining boxes with zeros – '0' – to indicate that fewer than three problems have been mentioned. For example, if the respondent mentioned "too much crime" and "poor street lighting" as two of the problems, but did not mention a third problem, then you will code '101' in boxes 17, 18, and 19 for the first problem mentioned, '205' in boxes 20, 21 and 22 for the second problem mentioned, and '000' in boxes 23, 24, and 25 because there was no third problem mentioned.

Code	Category
LAW & ORDER	
101	Crime; Unsafe Areas
102	Specific Reference to Youth-Related Law & Order Problems: Juvenile Delinquency, Teen-Age Gangs, Dope in Schools, etc.

Page Number	Card Number	Question Number	Box Number(s)	Coding
1	2	4	17-19 20-22 23-25	(Continued)

Code	Category
103	Poor Police Protection; Poor Law Enforcement
104	Control of Unwanted People (Undesirables, Teenagers, Homosexuals, Weirdos, etc.); breaking the law is not the issue; just want to get rid of the undesirables.
105	Pornography; Prostitution
106	Narcotics; High Drug Use; No Drug Control
107	Gambling
108	White Collar Crime; Business Crime; Collusion; Price-Fixing; Bribery; Tax Evasion
109	Expansion of Power of Police; Police Should be Free to do Job Properly
110	Reduction of Power of Police; Eliminatio of Police Brutality, Harassment
111	Poor Police-Community Relations
199	Other Law & Order Problems; General Reference to Law & Order

MUNICIPAL SERVICES (excluding ENVIRONMENT)

Code	Category
201	Poor Streets; Street Maintenance; Street Cleaning; Improve Streets (emphasis is on poor condition of roads; for lack of roads, use 404).
202	Poor Recreation Facilities; Lack of Entertainment
203	Poor Snow Removal Service
204	Poor Sewage and Drainage Systems

Page Number	Card Number	Question Number	Box Number(s)	Coding
1	2	4	17–19 20–22 23–25	(Continued)

Code	Category
205	Poor Street Lighting
206	Poor Shopping Facilities
207	Poor Trash/Garbage Removal Services
208	Poor Sidewalks; Not Enough Sidewalks
209	Inadequate Water Supply
210	Poor Fire Protection
211	Poor Airport Facilities; Need to Build, Improve, or Settle Problems of Location
212	Poor Flood Control
213	Poor Hazard Removal: Rat Control, Abandoned Cars, Vacant Houses, etc.
214	Poor Parks; Poor Natural Environment
299	Other Municipal Service Problem; General Reference to Municipal Services

ENVIRONMENT AND CLEANLINESS

Code	Category
301	Noise; Any Reference to Noise (e.g., Airport Noise, Noise from Teenagers, Shouting, Noisy Cars, etc.)
302	Air Pollution; Dirty Air; Air Smells
303	Litter; Trash; City Streets are Dirty
304	Too Crowded; Overcrowded; Too Much Population
305	Pollution: General Reference, Non-Specific
306	Conservation of Natural Resources; Forestry, Parks, Ecology, etc.
307	Ugly, Unattractive Housing/Buildings (emphasis is on beautification of city)

Page Number	Card Number	Question Number	Box Number(s)	Coding
1	2	4	17-19 20-22 23-25	(Continued)

Code	Category
308	Polluted Water; Bad Water
309	Chemical Pollution (e.g., Use of Pesticides for Agriculture; Fish Supply being destroyed by chemicals, etc.); does not include chemicals in the air – air pollution
310	Any Reference to Earthquakes
399	Other Environment or Cleanliness Problem; General Reference to Environment or Cleanliness

TRANSPORTATION

Code	Category
401	Inadequate Parking Facilities; Parking is a Problem
402	Traffic; Traffic Congestion; Need Better Traffic Control
403	Inadequate Public Transportation; Public Transportation is Poor
404	Poor Roads, Highways, Freeways; Need More Roads (emphasis is on lack of roads; for poor condition of roads, use 201)
499	Other Transportation Problems; General Reference to Transportation

HOUSING & DEVELOPMENT

Code	Category
501	Run-Down Areas; Slums; Ghettos; Need Renovation or Renewal of Bad Areas; Improve Present Areas:(emphasis is on low-quality housing; for attractiveness of housing, use 307)
502	Poor Land Use; Need Planning or Zoning

Page Number	Card Number	Question Number	Box Number(s)	Coding	
1	2	4	17–19 20-22 23-25	(Continued)	
				Code	Category
				503	Too Much Urban Renewal; Less Renovation Needed; Less Moving of Families
				504	Housing Shortage; Need More Housing
				505	High Rents; Need (Better) Rent Control
				506	High Costs of Buying House/Apartment/Condominium; House Prices are Too Expensive
				599	Other Housing Problem; General Reference to Housing
				TAXES & ADMINISTRATION	
				601	High Taxes; Need to Lower Taxes; Unfair or Inequitable Taxes; Dislike Tax or Particular Form of Tax (e.g., Property Taxes are Too High; Income Taxes are Too High)
				602	Tax Bonds Constantly Voted Down; Services Suffer from Lack of Funds
				603	Poor Communication Between Government and People; Need for More Responsiveness on Part of Government; Wisdom, Ability, General Representativeness of Elected Officials is Bad
				699	Other Tax or Administration Problem; General Reference to Taxes or Administration

Page Number	Card Number	Question Number	Box Number(s)	Coding
1	2	4	17–19 20–22 23–25	(Continued)

Code	Category
EDUCATION	
701	Inadequate Education Facilities; Need More Schools, Materials, Books (emphasis is on facilities)
702	Need More Teachers; Class Sizes Too Big
703	Pro-Integration; Segregated Schools; Need to Integrate Schools
704	Oppose Busing
799	Other Education Problem; General Reference to Education
HEALTH, WELFARE, EMPLOYMENT AND INCOME	
801	Alcoholism
802	Health Costs Too High; Poor People Can't Afford Health Costs
803	Inadequate Welfare Program; Inadequate Assistance to Poor, Aged, Disabled; More Concern for and Programs for Poor, Aged, Disabled; Need to Expand Welfare
804	Decrease Welfare Programs; Better, Stricter Regulations of Welfare Needed
805	Unemployment; Inadequate Employment; Job Retraining Needed; Too Many People Don't Have Needed Skills
806	Lack of Industry; Need More Industry; Aid for Depressed Economic Areas to Create Jobs

Page Number	Card Number	Question Number	Box Number(s)	Coding	
1	2	4	17-19 20-22 23-25	(Continued)	
				Code	**Category**
				807	Inadequate Pay, Salaries; Need for Better Pay, Higher Salaries
				899	Other Health, Welfare, Employment or Income Problem; General Reference to Health, Welfare, Employment or Income
				SOCIAL RELATIONS AND SOCIAL VALUES	
				901	Negative feelings or opinions about minority groups; perceptions of problems with minority groups; feelings of anxiety, threat, or prejudice
				902	Poor Race Relations; Relations with Minority Groups Need to be Improved; Need for Faster Integration; Protection for Minority Groups
				903	Breakdown of Family Structure; Lack of Parental Guidance; Parents Don't Discipline their Children; Need to Give More Attention to Children; Strengthen Family Ties
				904	Weak, Poor Social Morality; Need to Re-establish Old Values; Instill Young People with Christian (Other Religion) Values
				905	Too Much Sexual Freedom; Too Permissive a Society
				906	Unfriendly Neighbors; Poor Relations with Neighbors
				950	Other Social Relations or Social Value Problem; General Reference to Social Relations or Social Values

Page Number	Card Number	Question Number	Box Number(s)	Coding
1	2	4	17-19 20-22 23-25	(Continued) **Code** — **Category** OTHER PROBLEMS WHICH ARE MENTIONED 975 — Other Problem (use this category if none of the above categories applies) 998 — Don't Know 999 — Refused or No Answer Given Because the Question was not Asked
2	2	5a-h	26 27 28 29 30 31 32 33	For questions 5a-5h, for "Yes" - Y in Column A, code the circled number in Column B into the appropriate box. For a "No" - N in Column A, code '1' in the appropriate box. "Don't Know" in either Column A or Column B is coded as '8'. If there is a "Refused" or "No Answer," or if Column A is circled "Yes" - Y, but Column B is not circled, code as '9'. Be sure to match the item number with the correct box. For example, 5a is coded in box 26; 5b in box 27; 5c in box 28, etc.
3	2	6a-k	34 35 36 37 38 39 40 41 42 43 44	For questions 6a-6k, code the circled number in the appropriate box. Be sure that the item number and the correct box are matched (e.g., 6a is coded in box 34; 6d is coded in box 37; 6k in box 44, and so forth). "Refused" or "No Answer" is coded as '9'.
3	2	7	45	Code the circled response in box 45. "Don't Know" is coded as '8' and "Refused" or "No Answer" as '9'.
4	2	8	46	Code the circled response in box 46. "Don't Know" is coded as '8' and "Refused" or "No Answer" as '9'.

Page Number	Card Number	Question Number	Box Number(s)	Coding
4	2	9	47	Code the circled response in box 47. "Don't Know" is coded as '8' and "Refused" or "No Answer" as '9'.
5	2	10a-d	48 49 50 51	For questions 10a-10d, for "Yes" - Y in Column A, code the circled number in Column B in the appropriate box. For a "No" - N in Column A, code '1' in the appropriate box. "Don't Know" in either Column A or Column B is coded as '8'. If there is a "Refused" or "No Answer" or if Column A is circled "Yes" - Y, but Column B is not circled, code as '9'. Be sure to match the item number with the correct box. For example, 10b is coded in box 49, and 10d in box 51.
5	2	11a-f	52 53 54 55 56 57	For each mention which is circled, code '1' in the appropriate box. For each item which is not circled, code '0' in the appropriate box. For example, if "MORNING (7AM TO NOON)" and "EVENING (6PM TO 10PM)" are circled, you will code '1' in boxes 52 and 54, and '0' in boxes 53, 55, 56, and 57. Another example: if "ALL THE TIME" is circled, you will code '1' in box 56 and '0' in boxes 52, 53, 54, 55 and 57. Remember, each item is coded as '1' if it is circled and '0' if it is not. "Don't Know" is coded as '8' for each item in which it occurs; if "Don't Know" is written for the entire question, code '8' in each box. For a "Refused" or "No Answer" response for any item or for the entire question, code '9' in the appropriate box or boxes.
6	2	12	58	Code the circled response in box 58. "Don't Know" is coded as '8' and "Refused" or "No Answer" is coded as '9'.

Page Number	Card Number	Question Number	Box Number(s)	Coding
6	2	13a–e	59 60 61 62 63	For questions 13a–13e, for "Yes" - Y in Column A, code the circled number in Column B in the appropriate box. For a "No" - N in Column A, code '1' in the appropriate box. "Don't Know" in either Column A or Column B is coded as '8' and "Refused" or "No Answer" or if Column A is circled "Yes" - Y, but there is no response in Column B, code '9'. Be sure to match the item number with the correct box number. For example, 13a is coded in box 59, 13b in box 60, etc.
6	2	14	64	Code the circled response in box 64. "Don't Know" is coded as '8' and "Refused" or "No Answer" as '9'.
7	2	15a–g	65 66 67 68 69 70 71	For each mention which is circled, code '1' in the appropriate box. For each item which is not circled, code '0' in the appropriate box. For example, if "Close Doors or Windows," "Wear Earplugs," and "Considered Moving" are all mentioned, then code '1' in boxes 66, 68, and 70. In the remaining boxes – 65, 67, 69, and 71, code '0'. Remember, each item is coded as '1' if it is circled and '0' if it is not. "Don't Know" is coded as '8' for each item in which it occurs; if "Don't Know" is written for the entire question, code '8' in each box. For a "Refused" or "No Answer" response for any item or for the entire question, code '9' in the appropriate box or boxes.
7	2	16a–c	72 73 74	For questions 16a–16c, code the circled number in the appropriate box. Be sure that the item number and the correct box are matched (i.e., 16a is coded in box 72; 16b in box 73; and 16c in box 74). "Don't Know" is coded as '8' for each item in which it occurs and "Refused" or "No Answer" as '9' for each item in which it occurs.

THIS ENDS THE CODING FOR CARD #2

START CARD 3

Page Number	Card Number	Question Number	Box Number(s)	Coding
8	3	ID#	1-5	Code the respondent's identification number in boxes 1 through 5.
8	3	CARD	6-7	This is the pre-coded card number – '03'.
8,9	3	17a-t	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	For questions 17a-t, code the circled response in the appropriate box. "Don't Know" is coded as '8' and "Refused" or "No Answer" as '9'. Be sure that the item number and the correct box are matched (e.g., 17a is coded in box 8; 17c in box 10; 17g in box 14; 17k in box 18; 17p in box 23; 17r in box 25; 17t in box 27; and so forth).
9	3	17ua, ub	28-29 30-31	Aside from the above 20 noise sources, there may be additional mentions. If your Coding Director decides, extra codes may be developed in which case they will be given to you. Space is being left for two extra mentions (boxes 28-29 and 30-31). If no source is given, list zeros – '0' – in boxes.
10	3	18a-f	32 33 34 35 36 37	For each mention which is circled, code '1' in the appropriate box. For each item which is not circled, code '0' in the appropriate box. For example, if "Operator/Owner" and "Federal Government" are mentioned, code '1' in boxes 33 and 36. In the remaining boxes – 32, 34, 35, and 37 – code '0'.

Page Number	Card Number	Question Number	Box Number(s)	Coding
10	3	18a-f	32 33 34 35 36 37	(Continued) Remember, each item is coded as '1' if it is circled and '0' if it is not. "Don't Know" is coded as '8' for each item in which it occurs. If "Don't Know" is written for the entire question, code '8' in each box. For a "Refused" or "No Answer" response for any item or for the entire question, code '9' in the appropriate box or boxes.
10	3	19, 19A	38 39 40 41 42	Questions 19 and 19A are considered together. For question 19, code the circled response in box 38. If "Yes" - 2 - has been circled, you will code '0' in boxes 39, 40, 41, and 42. This indicates that the respondent was not asked question 19A. If "No" - 1 - has been circled in question 19, then question 19A was asked. In this case, code the circled responses for 19A in boxes 39, 40, 41, and 42. That is, if a response is mentioned, then code '1'; if it is not mentioned, code '2'. '2' indicates that the respondent was asked the question but did not choose the response. If a "Not Mentioned" space has not been circled, but other spaces in question 19A have been answered, you can assume a "Not Mentioned" code: '2'. "Don't Know" is coded as '8' for each item in which it occurs; if "Don't Know" is written for the entire question — either Question 19 or Question 19A — code '8' in each box. A "Refused" or "No Answer" for the entire question is coded as '9' in each box. Remember, Question 19 and Question 19A are related. For a "Yes" - 2 - in question 19, code '2' in box 38 and code '0' in boxes 39 through 42. For a "No" - 1 - in question 19, code '1' in box 38 and code the circled responses for 19A in boxes 39 through 42.
11	3	20	43	Code the circled response in box 43. "Don't Know" is coded as '8' and "Refused" or "No Answer" as '9'.

Page Number	Card Number	Question Number	Box Number(s)	Coding
12	3	21a–h	44 45 46 47 48 49 50 51	For questions 21a through 21h, code the circled response in the appropriate box. "Refused" or "No Answer" is coded as '9' for each item in which it occurs; if "Refused" or "No Answer" is written for the entire question, code '9' in each box. Be sure that the item number and the correct box are matched. For example, 21a is coded in box 44; 21d in box 47; 21g in box 50, and so forth.

THIS ENDS THE CODING FOR CARD #3

START CARD 4

Page Number	Card Number	Question Number	Box Number(s)	Coding
13	4	ID#	1-5	Code the respondent's identification number in boxes 1 through 5.
13	4	CARD	6-7	This is the pre-coded card number – '04'.
13	4	22	8-9	Calculate and then code the Respondent's age to the nearest year into boxes 8 and 9. Code this as a two-digit number. For example, "34 Years" is coded as '34'. "Don't Know" is coded as '98' and "Refused" or "No Answer" is coded as '99'. BE SURE TO COUNT CORRECTLY
13	4	23	10-11	Code the circled number in boxes 10 and 11. "OR MORE" is coded as '21'. "Don't Know" is coded as '98' and "Refused" or "No Answer" as '99'.
13	4	24,24A	12-13	Questions 24 and 24A are related. If a Respondent answered "No" to question 24, '80' is coded in boxes 12 and 13. If "Yes" has been answered, then 'X' is circled and question 24A will have been asked. In this case, code the circled numbers for Q24A in boxes 12 and 13. For example, one respondent answers "No" to question 24. Code '80' in boxes 12 and 13. Another respondent answers "Yes" in question 24 and "Working Full-Time" is circled in Q24A. In this case, code '01' in boxes 12 and 13. If "Something Else" is coded in question 24A, check if it is one of the other categories; sometimes interviewers become confused and categorize a response as "Something Else" when it really belongs in another category. For example, if a Respondent answers "On a pension," this should be "Retired" – 04. However, "Disabled" or "In the Army" are actually coded as "Something Else" - 07.

Page Number	Card Number	Question Number	Box Number(s)	Coding
13	4	24,24A	12-13	(Continued) In case there is confusion and R has indicated hours of work, "Working Full-Time" is defined as working 32 hours a week or more. Anything less would be "Working Part-Time." "Don't Know" is coded as '98' and "Refused" or "No Answer" is coded as '99'. If two or more codes are circled, then code the lowest number.
14	4	25,25A	14-15	Questions 25 and 25A are related and are coded as one number in boxes 14 and 15. This is a special code. You will have to consider the answers to both Questions 25 and 25A in order to code this number. Question 25 will tell you the occupation or type of work that R does or did (if he or she is retired). Question 25A tells which business, industry, or type of organization this work is (was) done within. Between these two questions, you should be able to categorize the type of occupation of the Respondent. Go over the list below carefully before starting, so that you are familiar with the occupational groups. Categorize the Respondent's occupation into one of 15 occupational groups presented below. Also, some of the occupations that fall within them are given as examples. Read the answers to Questions 25 and 25A carefully in order to determine the category for the occupation. Then code the occupational group number in boxes 14 and 15. If you have any difficulties, ask your Coding Director.

Page Number	Card Number	Question Number	Box Number(s)	Coding
14	4	25,25A	14–15	(Continued)

Code Category

CODES FOR NOT IN LABOR FORCE

00 NEVER WORKED (Answered "No" to Question 24).

01 HAVE WORKED BUT NOT IN LABOR FORCE NOW (Answered "Yes" to Question 24, but indicated one of the following in Question 25):

a. Beggar
b. Keeping House; Housewife
c. Lives from Public Assistance
d. Lives off Property, Inheritance, or Other Income
e. Lives off Social Security
f. Student.

If the Respondent is presently not working but gives an occupation in Questions 25 and 25A, then categorize the occupation into one of the codes below. Only if the Respondent lists an answer given in a–f above, use code '01'.

02 MEMBER OF THE ARMED FORCES

CODES FOR OCCUPATIONS

03 PROFESSIONAL, TECHNICAL AND SIMILAR WORKERS

Examples:

a. Accountants
b. Architects
c. Computer Specialists

Page Number	Card Number	Question Number	Box Number(s)	Coding
14	4	25,25A	14-15	(Continued)

Code	Category
03	(Continued) d. Engineers e. Lawyers and Judges f. Librarians g. Life and Physical Scientists h. Nurses, Health Technologists, and Other Health Personnel i. Physicians and Dentists j. Religious Workers k. Social Scientists l. Social Workers m. Teachers - at all levels n. Technicians o. Writers, Artists and Entertainers
04	MANAGERS AND ADMINISTRATORS, EXCEPT FARM Examples: a. Administrators b. Bank Officers c. Buyers and Shippers d. Directors e. Inspectors f. Managers and Superintendents g. Officials h. Postmasters i. Treasurers
05	SALES WORKERS Examples: a. Advertising Agents b. Auctioneers c. Hucksters and Peddlers d. Insurance Agents e. Newspaper Sales and Delivery People f. Real Estate Agents g. Sales People and Sales Clerks

Page Number	Card Number	Question Number	Box Number(s)	Coding
14	4	25,25A	14-15	(Continued)

Code	Category
06	CLERICAL AND SIMILAR WORKERS

Examples:

a. Aides (e.g., Teacher's Aide)
b. Appraiser
c. Bank Tellers
d. Billing Clerks
e. Cashiers
f. Collectors
g. Dispatchers
h. Estimators and Investigators
i. File Clerks
j. Library Attendants
k. Messengers
l. Meter Readers
m. Office Machine Operators
n. Operators
o. Secretaries - at all levels

Code	Category
07	CRAFTSMEN AND SIMILAR WORKERS

Examples:

a. Apprentices
b. Bakers
c. Brickmasons
d. Bulldozer Operators
e. Craftsmen
f. Decorators
g. Electricians
h. Foremen
i. Installers
j. Mechanics and Repairmen
k. Millers
l. Plasterers
m. Tailors

Page Number	Card Number	Question Number	Box Number(s)	Coding
14	4	25,25A	14-15	(Continued)

Code **Category**

08 OPERATIVES, EXCEPT TRANSPORT

Examples:

a. Assemblers, Drillers, Blasters
b. Garage Workers and Gas Station Attendants
c. Graders and Sorters
d. Meat Cutters and Butchers
e. Operatives
f. Precision Machine Operatives
g. Textile Operatives

09 TRANSPORT EQUIPMENT OPERATIVES

Examples:

a. Conductors
b. Delivery Personnel (i.e., transporting)
c. Drivers
d. Parking Attendants
e. Railroad Workers

10 LABORERS, EXCEPT FARM

Examples:

a. Caretakers, except Farm
b. Gardeners, except Farm
c. Handlers
d. Helpers
e. Longshoremen
f. Lumbermen
g. Teamsters
h. Warehouse Personnel
i. Washers and Cleaners

Page Number	Card Number	Question Number	Box Number(s)	Coding
14	4	25,25A	14-15	(Continued)

Code	Category
11	FARMERS AND FARM MANAGERS Examples: a. Farmers (Owners and Tenants) b. Farm Managers
12	FARM LABORERS AND FARM FOREMEN Examples: a. Farm Foremen b. Farm Laborers, Unpaid Family Workers c. Farm Laborers, Wage Workers d. Farm Service Laborers, Self-Employed
13	SERVICE WORKERS, EXCEPT PRIVATE HOUSEHOLD Examples: a. Cleaning Service Workers b. Food Service Workers c. Personal Service Workers d. Protective Service Workers
14	PRIVATE HOUSEHOLD WORKERS Examples: a. Child Care Workers b. Cooks: Private Household c. Housekeepers d. Maids and Servants

Page Number	Card Number	Question Number	Box Number(s)	Coding
14	4	25,25A	14-15	(Continued) Code Category 15 UNCLASSIFIABLE OCCUPATION (to be used only if none of the above categories apply) 98 DON'T KNOW 99 REFUSED or NO ANSWER
15	4	26	16-17	Code the circled number into boxes 16 and 17. "Don't Know" is coded as '98' and "Refused" or "No Answer" as '99'.
16	4	27	18	Code the circled number into box 18. If two or more codes are circled, code '7' for "Other." "Don't Know" is coded as '8' and "Refused" or "No Answer" as '9'.
17	4	28	19	Code the circled number into box 19. "Don't Know" is coded as '8' and "Refused" or "No Answer" as '9'.
17	4	29	20-21	Write recorded number in boxes 20 and 21 as a two-digit code. If number of persons is 9 or fewer, add a zero – '0' – before the number (e.g., 6 becomes '06', 3 becomes '03', etc.). "Don't Know" is coded as '98' and "Refused" or "No Answer" as '99'.
18	4	TIME	22-23	Code the time in minutes into boxes 22 and 23. The total number of minutes should have been calculated by the editor, but if not, refer to page vii of the questionnaire to determine starting time. Remember, the total number of minutes is equal to the number of minutes between the start of the interview and the end minus the number of interrupted minutes.

Page Number	Card Number	Question Number	Box Number(s)	Coding
18	4	B1	24	Code the circled number into box 24. "No Answer" is '9'.
18	4	B2	25	Code the circled number into box 25. "No Answer" is '0'.
18	4	B3	26-28	Code the number of feet into boxes 26, 27, and 28. Remember, this is a three-digit number. For example, if the number of feet is 50, you will code this as '050'; if the number of feet is 9, you will code this as '009', and so forth. "No Answer" is '000'.
18	4	B4	29	Code the circled number into box 29. "No Answer" is '9'.
18	4	B5	30	Code the circled number into box 30. "No Answer" is '9'.
18	4	B6	31	Code the circled number into box 31. "No Answer" is '9'.

THIS ENDS THE CODING FOR THE QUESTIONNAIRE.

CHECK TO BE SURE THAT YOU HAVE CODED ALL BOXES AND THAT YOUR HANDWRITING IS LEGIBLE.

①

Example 1

COMMUNITY ENVIRONMENT QUESTIONNAIRE

Table 06

If the # of Adults is:	1	2	[✓ 3]	4	5	6 or more
Then Select Adult #:	1	1	[✓ 2]	2	3	3

NZ 02
AR 5
CL 068
CTY 010

Address 4225 1/2 W. Adams St.
City/Community Lawndale
Respondent # 068-03

Call Record Sheet

1st Interviewer Maria Irene ID# 42 # Calls 4
2nd Interviewer ID# # Calls

DATE	DAY OF WEEK	TIME		RESULT (CODE EVERY CALL)
1) 5/15/78	Monday	10⁰⁰	[✓ am] pm	01
2) 5/17/78	Wednesday	7¹⁰	am [✓ pm]	04
3) 5/20/78	Saturday	11¹⁵	[✓ am] pm	03 Sunday 12⁰⁰
4) 5/21/78	Sunday	12⁰⁰	am [✓ pm]	90
5)			am pm	

RESULT:
no one home/no answer — 01
respondent not at home — 02
appointment made — 03 — WRITE TIME/DATE
Initial contact busy — no appointment — 04
respondent busy — no appointment — 05
Initial contact ill — no appointment — 06
respondent ill — no appointment — 07
appt. cancelled by initial contact — 08
appt. cancelled by respondent — 09
non-interview — 82
completed an appointment — 90
completed no appointment — 91

	DATE	INITIAL
LOGGED OUT	5/13	PB
LOGGED IN/TO EDITING	5/21	PB
EDITING COMPLETE	5/22	GR
SELECTED FOR VALIDATION	5/23	PB
VALIDATION COMPLETE	5/25	GT

	DATE	INITIAL
LOGGED BY CODING	5/26	HI
CLOSED-ENDED CODING COMPLETE	5/27	MR
QUALITY CONTROL OF CLOSED-ENDED CODING	5/27	PB
OPEN-ENDED CODING COMPLETE	5/28	TM
QUALITY CONTROL OF OPEN-ENDED CODING	5/28	PB

	DATE	INITIAL
FINAL CHECK	7/16	PB

START CARD 1

	1	2	3	4	5
ID#	0	6	8	0	3

	6	7
CARD:	0	1

	8	9
NZ:	0	2

	10
AR:	5

	11	12	13
CL:	0	6	8

	14	15	16
CTY:	0	1	0

	17	18
SELECTION LABEL #:	0	6

	19
# CALLS:	4

	20	21
INTERVIEW DATE:	2	4

①

II **CONFIDENTIAL**

FOR NON-INTERVIEWS ONLY

FIRST INTERVIEWER		SECOND INTERVIEWER	
A.		E.	
Vacant	01	Vacant	01
Address not a dwelling	02	Address not a dwelling	02
No such address	03	No such address	03
No one at home, final call	04	No one at home, final call	04
Respondent not at home, final call	05	Respondent not at home, final call	05
Language barrier	06	Language barrier	06
(What language? ____________)		(What language? ____________)	
Secure residence	07	Secure residence	07
Secure apartment building	08	Secure apartment building	08
Manager refuses	09	Manager refuses	09
Initial contact incapable	10	Initial contact incapable	10
WHY?: ____________		WHY?: ____________	
Initial contact refused	20	Initial contact refused	20
WHY?: ____________		WHY?: ____________	
Respondent incapable	30	Respondent incapable	30
WHY?: ____________		WHY?: ____________	
Respondent refused	40	Respondent refused	40
VERBATIM: ____________		VERBATIM: ____________	
Refused to open door	50	Refused to open door	50
COMMENTS: ____________		COMMENTS: ____________	
Other	60	Other	60
→ SPECIFY: ____________		→ SPECIFY: ____________	

①

CONFIDENTIAL

FOR NON-INTERVIEWS ONLY

FIRST INTERVIEWER

B. REFUSER

Black, non-Spanish surname	1
Spanish surname	2
Oriental	3
White, non-Spanish surname (not Oriental)	4
Other	5

SPECIFY: ____________________

____

C. REFUSER

Male	1
Female	2

D. AGE ESTIMATE OF REFUSER ____________

COMMENTS: ____________________

____

SECOND INTERVIEWER

F. REFUSER

Black, non-Spanish surname	1
Spanish surname	2
Oriental	3
White, non-Spanish surname (not Oriental)	4
Other	5

SPECIFY: ____________________

____

G. REFUSER

Male	1
Female	2

H. AGE ESTIMATE OF REFUSER ____________

COMMENTS: ____________________

____

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①

A1. RESPONDENT ID # 068-03

A2. INTERVIEWER: Maria Josue ID # 42

DOORSTEP INTRODUCTION (IN YOUR OWN WORDS)

Good Morning/Afternoon/Evening. I'm (........), a representative of (........ YOUR ORGANIZATION). (SHOW IDENTIFICATION)

We're taking a public opinion study in this area concerning the environment and its impact upon the community. Your house has been selected at random from among those around here. By interviewing select individuals, we can be sure we have scientifically represented the attitudes and opinions of the community. The more people who cooperate, the more successful we can be in representing all the people in this city.

I'd like to take a few minutes of your time and ask you a few questions. On the basis of these questions, a respondent will be scientifically selected to be interviewed. The actual interview will then take approximately 20 to 30 minutes. We feel that you will find our questions interesting. Everything you tell us will be strictly confidential. Your name will not be connected in any way with the findings of this very important study. This interview will be combined with others in the sample to give information about the community as a whole.

In this way, valuable information about the environment will be gathered which will help improve the quality of future city planning.

①

ROSTER FOR RESPONDENT SELECTION

I would like to make a list of the persons 18 years or over who live here as permanent members of your household. This will tell me which adult I am to interview.

A3. Starting with the oldest male, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT MALES HAVE BEEN LISTED.)

Now, taking the oldest female, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT FEMALES HAVE BEEN LISTED.)

COMPLETE COLUMNS B-D FOR EACH MENTION. IN COLUMN E, STARTING WITH THE FIRST PERSON LISTED, NUMBER ALL THOSE LISTED IN CONSECUTIVE ORDER (1,2,3,...ETC.). LOOK AT SELECTION TABLE ON FIRST PAGE TO DETERMINE WHICH NUMBER PERSON IS THE RESPONDENT. CIRCLE THE RESPONDENT'S NUMBER IN COLUMN E.

A First Name	B Is this (...)'s Permanent Residence?		C Sex		D Age on Last Birthday	E Number and Circle # Selected
	Yes	No	Male	Female		
1) Allen	[✓ 1]	2	[✓ 1]	2	64	1
2) [✓ James]	[✓ 1]	2	[✓ 1]	2	38	[✓ 2]
3) Victoria	[✓ 1]	2	1	[✓ 2]	36	3
4)	1	2	1	2		
5)	1	2	1	2		
6)	1	2	1	2		
7)	1	2	1	2		
8)	1	2	1	2		

IF NOT PERMANENT RESIDENCE, REMOVE (...) FROM ROSTER. RELIST MEMBERS IN ORDER (DO NOT SKIP A LINE NUMBER).

IF NO ONE IS A PERMANENT RESIDENT AT THIS ADDRESS, HOUSEHOLD BECOMES UNQUALIFIED.

TOTAL # ON LIST: 22 3

FOR R ONLY

R # ON LIST: 23 2

SEX OF R: 24 1

AGE OF R: 25 26 3 8

END CARD 1

(YOU WILL NOW KNOW WHICH ADULT IN THE HOUSEHOLD YOU ARE TO INTERVIEW. IF THAT PERSON TO BE INTERVIEWED IS THE SAME PERSON AS THE "INITIAL CONTACT" YOU ARE ALREADY TALKING TO, ASK QUESTION A4. IF IT IS NOT THE SAME PERSON, ASK QUESTION A5.)

A4. **In checking my sampling table, I see that you are the person I am supposed to interview in this household.**

GO TO PAGE 1 AND START QUESTION 1.

A5. **In checking my sample table, I see that I must interview (.....), who is (male/female), and who is (AGE). Is (he/she) available now to be interviewed?**

(IF RESPONDENT IS AVAILABLE, MEET THE PERSON AND REPEAT INTRODUCTION ON PAGE iv.) IF NOT AVAILABLE, DETERMINE BEST TIME TO MEET WITH RESPONDENT.

You have been selected from a sampling table to be interviewed.

GO TO PAGE 1 AND START QUESTION 1.

A6. TIME BEGINNING: 12^{15} AM [✓ PM]

1. How long have you lived in this area at your present address or within a few blocks of this address?

ENTER ACTUAL NUMBER OF YEARS, ROUNDED TO NEAREST YEAR (1/2-YEAR OR MORE ROUNDED UP). IF "ALL MY LIFE" OR "LESS THAN 6 MONTHS," CODE BELOW.

RECORD YEARS: 12

LESS THAN 6 MONTHS 95

ALL MY LIFE (REGARDLESS OF HOW LONG). 90

2. How would you rate the area in which you live? Would you say it was:

Very Good, ... 5
Good, ... 4
[✓ Fair,. . . . . 3]
Poor, or 2
Very Poor? 1

3. Now, thinking of your area, what three things do you particularly like about this area; that is, within a few blocks of here?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION The neighbors are very nice.
2nd MENTION It's safe at night
3rd MENTION There is convenient shopping

4. What are the three most important problems facing the residents of your area today?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION The kids from school hang around
2nd MENTION The motorcycles on 5th St.
3rd MENTION They should fix the sewers

else: What about the motorcycles? They make too much noise.

②

START CARD 2

ID#

1	2	3	4	5
0	6	8	0	3

CARD: 6 7 | 0 2

Q1: 8 9 | 1 2

Q2: 10 | 3

Q3:
1st: 11 12 | 1 2
2nd: 13 14 | 1 3
3rd: 15 16 | 0 2

Q4:
1st: 17 18 19 | 1 0 4
2nd: 20 21 22 | 3 0 1
3rd: 23 24 25 | 2 0 4

②

5. As I read the following list, would you tell me whether any of these are problems here in this area? Please answer "Yes" or "No".

READ (a–h). CIRCLE APPROPRIATE CODE IN COLUMN A.

(We will be using cards to identify your answers to various questions. Each card is numbered at the top right-hand corner. Please do not turn the cards until I tell you to do so.)

FOR EACH "YES" IN COLUMN A, ASK: Please turn to Card #5. How severe a problem is (...)? INSERT EACH PROBLEM WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Would you say that (...) is a Problem?	YES	NO	EXTREMELY SEVERE	QUITE SEVERE	MODERATELY SEVERE	NOT VERY SEVERE	DON'T KNOW
a. Traffic Congestion?	[✓ Y]	N	5	[✓ 4]	3	2	8
b. Polluted Water?	Y	[✓ N]	5	4	3	2	8
c. Noise?	[✓ Y]	N	5	4	3	[✓ 2]	8
d. Crime?	Y	[✓ N]	5	4	3	2	8
e. Run-Down Areas in Need of Improvement?	[✓ Y]	N	5	4	[✓ 3]	2	8
f. Unclean Air?	Y	[✓ N]	5	4	3	2	8
g. Parking?	[✓ Y]	N	[✓ 5]	4	3	2	8
h. Inadequate Low-Income Housing?	Y	N	5	4	3	2	[✓ 8]

Q5:

a:	26	4
b:	27	1
c:	28	2
d:	29	1
e:	30	3
f:	31	1
g:	32	5
h:	33	8

②

6. Please look at card #6. As I read the following, please tell me how you would rate each of the local public services in this area?

READ (a-k). CIRCLE APPROPRIATE CODE.

How Would You Rate:	VERY GOOD	GOOD	FAIR	POOR	VERY POOR	DON'T KNOW/ DOESN'T APPLY
a. Quality of Schools?	5	[✓ 4]	3	2	1	8
b. Police Protection?	5	4	[✓ 3]	2	1	8
c. Fire Protection?	5	4	[✓ 3]	2	1	8
d. Recreation Facilities?	5	4	3	2	[✓ 1]	8
e. Garbage Collection?	5	4	3	[✓ 2]	1	8
f. Hospitals and Health Facilities?	5	[✓ 4]	3	2	1	8
g. Public Transportation?	5	4	3	2	[✓ 1]	8
h. Street Maintenance?	5	4	[✓ 3]	2	1	8
i. Sewage and Drainage?	5	4	3	2	1	[✓ 8]
j. General Pollution Control?	5	4	3	2	1	[✓ 8]
k. Noise Control?	5	4	3	2	[✓ 1]	8

I'd like to ask you a question about your health. This will allow us to better understand your answers to the remaining questions.

7. How would you rate your health overall? Would you say that your health is:

"It's none of your business — my health."

Very Good, ...5
Good, ...4
Average, ...3
Poor, or 2
Very Poor? 1

Refused

Q6:

	Column	Code
a:	34	4
b:	35	3
c:	36	3
d:	37	1
e:	38	2
f:	39	4
g:	40	1
h:	41	3
i:	42	8
j:	43	8
k:	44	1

Q7: 45 9

②

Now, in the following questions I will be asking you about the quietness of this area; that is, within a few blocks or so.

8. Please turn to card #8. Looking at the card, please tell me how quiet or noisy you consider this area to be?

VERY QUIET	4
QUIET	3
NOISY	[✓ 2]
VERY NOISY	1

Q8: 46 ☐ 2

Please turn to card #9. As you can see at the top of this card, we have defined the word annoyed as meaning: to be disturbed, stressed, or upset by the repeated occurrence of noise. There is then a scale of annoyance, showing the amount of annoyance from Most to Least.

9. Now, using this card, please tell me which one of these best describes how annoyed you are by noise in this area?

TREMENDOUSLY ANNOYED	1
HIGHLY ANNOYED	2
CONSIDERABLY ANNOYED	3
MEDIUM ANNOYED	[✓ 4]
PARTIALLY ANNOYED.	5
A LITTLE ANNOYED	6
NOT AT ALL ANNOYED	7

Q9: 47 ☐ 4

②

10. Does noise interfere with any of the following activities? Please answer "Yes" or "No." READ (a-d). CIRCLE APPROPRIATE CODE IN COLUMN A.

FOR EACH "YES," READ ACTIVITY AND ASK: Please turn to card #10. How often does it interfere with (...)? INSERT EACH ACTIVITY WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Does Noise Interfere with:	YES	NO	ALWAYS INTERFERES	FREQUENTLY INTERFERES	SOMETIMES INTERFERES	RARELY INTERFERES	DON'T KNOW
a. Sleeping?	[✓ Y]	N	5	4	[✓ 3]	2	8
b. Talking or Listening to the Radio, Watching TV, etc?	Y	[✓ N]	5	4	3	2	8
c. Reading?	[✓ Y]	N	5	4	[✓ 3]	2	8
d. Resting?	[✓ Y]	N	5	4	[✓ 3]	2	8

Q10:

48 a: 3

49 b: /

50 c: 3

51 d: 3

11. Please turn to card #11. During which of these time periods does noise annoy you most? CIRCLE ALL MENTIONS.

a.	MORNING (7AM TO NOON)	1
b.	AFTERNOON (NOON TO 6PM)	1
c.	EVENING (6PM TO 10PM)	[✓ 1]
d.	NIGHTTIME (10PM TO 7AM)	[✓ 1]
e.	ALL THE TIME	1
f.	NOISE NEVER ANNOYS ME	1

Q11:

52 a: 0

53 b: 0

54 c: /

55 d: /

56 e: 0

57 f: 0

②

12. Generally speaking, do you think noise affects your physical or emotional health and well-being?

YES . . . . [✓ .3]
NO 1
MAYBE 2

Q12: 58 3

13. Does noise affect your health in any of the following ways? Please answer "Yes" or "No." READ (a-e). CIRCLE APPROPRIATE CODE IN COLUMN A.

FOR EACH "YES," READ SYMPTOM AND ASK: Please turn to card #13. How often does noise cause (...)? INSERT EACH SYMPTOM WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Does Noise Cause:	YES	NO	ALL THE TIME	FREQUENTLY	SOMETIMES	RARELY	DON'T KNOW
a. Headaches?	[✓ Y]	N	5	4	[✓ 3]	2	8
b. Tiredness?	Y	[✓ N]	5	4	3	2	8
c. Irritability?	[✓ Y]	N	5	[✓ 4]	3	2	8
d. Hearing Loss or Difficulties?	Y	[✓ N]	5	4	3	2	8
e. An Existing Health Problem to Get Worse?	Y	[✓ N]	5	4	3	2	8

Q13:
a: 59 3
b: 60 1
c: 61 4
d: 62 1
e: 63 1

14. Please turn to card #14. To what extent have you become accustomed to noise?

HIGHLY ACCUSTOMED 5
QUITE ACCUSTOMED 4
MEDIUM ACCUSTOMED 3
NOT VERY ACCUSTOMED . . . . . [✓ .2]
NOT AT ALL ACCUSTOMED 1

Q14: 64 2

②

15. Please turn to card #15. To reduce noise in your home, have you or any member of your household taken any of these actions?

CIRCLE ALL MENTIONS.

- a. USE INSULATION OR SOUNDPROOFING 1
- b. CLOSE DOORS OR WINDOWS . . . . [✓ 1]
- c. TURN-ON OR TURN-UP RADIO, TV, OR STEREO TO MASK NOISE . . . . [✓ 1]
- d. WEAR EARPLUGS 1
- e. CHANGE LOCATION OF SLEEPING QUARTERS 1
- f. CONSIDERED MOVING 1
- g. NONE OF THESE 1

16. Please tell me whether you or any member of your household have done any of these things to help reduce noise in this area? Please answer "Yes" or "no."

	YES	NO
a. Complaining to a Neighbor About Making Too Much Noise?	[✓ 1]	0
b. Writing, Telephoning, or Visiting an Official?	1	[✓ 0]
c. Initiating Legal Action?	1	[✓ 0]

Q15:

a:	65	0
b:	66	/
c:	67	/
d:	68	0
e:	69	0
f:	70	0
g:	71	0

Q16:

a:	72	/
b:	73	0
c:	74	0

END CARD 2

③

START CARD 3

ID#

1	2	3	4	5
0	6	8	0	

CARD:

6	7
0	3

Now I'd like to explore some specific noise sources that may or may not annoy you in this area.

17. Please turn to card #17. As I read the following list of noise sources, tell me how annoyed you are by each noise source in this area.

READ (a-u). CIRCLE APPROPRIATE CODE.

How Annoyed are You by Noise from (...)?	TREMENDOUSLY ANNOYED	HIGHLY ANNOYED	CONSIDERABLY ANNOYED	MEDIUM ANNOYED	PARTIALLY ANNOYED	A LITTLE ANNOYED	NOT AT ALL ANNOYED
a. Traffic?	1	[✓ 2]	3	4	5	6	7
b. Motorcycles?	[✓ 1]	2	3	4	5	6	7
c. Trucks?	1	2	[✓ 3]	4	5	6	7
d. Buses?	1	2	3	4	[✓ 5]	6	7
e. Automobiles?	1	2	3	[✓ 4]	5	6	7
f. Highways or Freeways?	1	2	3	4	5	[✓ 6]	7
g. Recreational Vehicles (e.g., Snowmobiles?)	1	2	3	"I don't know 4	about 5	these." 6	7
h. Garbage Trucks?	1	2	3	4	[✓ 5]	6	7
i. Emergency Vehicles/ Sirens?	1	2	3	[✓ 4]	5	6	7
j. Entertainment Centers (e.g., clubs, movies, places that play live music)?	1	2	[✓ 3]	4	5	6	7
k. Pets/Animals?	1	2	3	4	5	6	[✓ 7]
l. Neighbors' Homes (e.g., noisy stereo, loud talking)?	1	2	3	4	5	6	[✓ 7]
m. Air Conditioners?	1	2	3	4	5	6	[✓ 7]
n. Lawnmowers/ Garden Equipment?	1	2	3	4	5	6	[✓ 7]
o. Jet Airplanes?	1	2	3	4	[✓ 5]	6	7

Q17:

	Column	Code
a:	8	2
b:	9	1
c:	10	3
d:	11	5
e:	12	4
f:	13	6
g:	14	8
h:	15	5
i:	16	4
j:	17	3
k:	18	7
l:	19	7
m:	20	7
n:	21	7
o:	22	5

QUESTION 17 CONTINUES ON NEXT PAGE.

③

17. (Continued)

How Annoyed are You by Noise from (...)?	TREMENDOUSLY ANNOYED	HIGHLY ANNOYED	CONSIDERABLY ANNOYED	MEDIUM ANNOYED	PARTIALLY ANNOYED	A LITTLE ANNOYED	NOT AT ALL ANNOYED
p. Small Airplanes?	1	2	3	4	5	6	[✓ 7]
q. Helicopters?	1	2	3	4	5	[✓ 6]	7
r. Trains?	1	2	3	4	5	6	[✓ 7]
s. Construction Noise?	1	2	3	4	[✓ 5]	6	7
t. Commercial or Industrial Equipment?	1	2	3	4	5	[✓ 6]	7

u. What Other Noise Sources Annoy You?

The crowds during football season at the stadium.
First Mention

None Other
Second Mention

Q17:

p:	23	7
q:	24	6
r:	25	7
s:	26	5
t:	27	6

u:

	28	29
1st:	0	7
	30	31
2nd:	0	0

③

Now I'd like to ask you some questions about reducing noise in this area.

18. Please turn to card #18. Which of the following should be responsible for reducing noise in this area?

CIRCLE ALL MENTIONS.

a. MANUFACTURER	1
b. OPERATOR/OWNER	[✓ 1]
c. LOCAL GOVERNMENT (includes police, local noise control office, any other local administrative office)	[✓ 1]
d. STATE GOVERNMENT	1
e. FEDERAL GOVERNMENT	1
f. NONE	1

19. Do you think this community should have a noise control program to specifically work on reducing noise levels? This program would be funded by the community.

YES	SKIP TO Q20	[✓ 2]
NO	ASK Q19A.	1

19A. Please turn to card #19. Why do you feel that there should not be a noise control program in this community?

CIRCLE APPROPRIATE CODE.

	MENTIONED	NOT MENTIONED
a. I DON'T THINK ANYTHING CAN BE DONE	1	2
b. I DON'T CARE; I'M NOT BOTHERED ENOUGH	1	2
c. IT IS NOT THE RESPONSIBILITY OF THE COMMUNITY	1	2
d. IT IS TOO COSTLY	1	2

Q18:

a:	32	0
b:	33	/
c:	34	/
d:	35	0
e:	36	0
f:	37	0

Q19:	38	2

Q19A:

a:	39	0
b:	40	0
c:	41	0
d:	42	0

(TO PRECEDE Q20):

NOT TO BE INCLUDED IN PRINTED QUESTIONNAIRE

NOTE TO RESEARCHERS: FOR Q20, YOU MUST TYPE THE ACTUAL COST TO YOUR CITY IN THE APPROPRIATE SPACE. FOR a. YOU MULTIPLY $0.10 TIMES THE POPULATION SIZE OF YOUR CITY. FOR b. YOU MULTIPLY $0.25 TIMES THE POPULATION SIZE OF YOUR CITY. FOR c. YOU MULTIPLY $0.50 TIMES THE POPULATION SIZE OF YOUR CITY. FOR d. YOU MULTIPLY $1.00 TIMES THE POPULATION SIZE OF YOUR CITY. FOR e. YOU MULTIPLY $2.50 TIMES THE POPULATION SIZE OF YOUR CITY. FOR f. YOU TAKE THE FIGURE FOR e. AND TYPE IT AFTER "MORE THAN________."

③

). Please turn to card #20. Keeping in mind your present level of taxes, how much in additional taxes would you be willing to pay on a yearly basis for a noise control program?

This card shows how much it will cost your city as a whole and how much it will cost each individual in the city.

How much would you be willing to pay in additional taxes for a noise control program?

Q20:

43

$\boxed{4}$

ADDITIONAL TAXES

COST TO CITY	COST TO INDIVIDUAL	
	(OR APPROXIMATELY 10¢ FOR EACH INDIVIDUAL A YEAR)	1
	(OR APPROXIMATELY 25¢ FOR EACH INDIVIDUAL A YEAR)	2
	(OR APPROXIMATELY 50¢ FOR EACH INDIVIDUAL A YEAR)	3
	(OR APPROXIMATELY $1.00 FOR EACH INDIVIDUAL A YEAR)	[✓ 4]
	(OR APPROXIMATELY $2.50 FOR EACH INDIVIDUAL A YEAR)	5
MORE THAN ________	(OR MORE THAN $2.50 FOR EACH INDIVIDUAL A YEAR)	6
I WOULD NOT PAY ANY EXTRA TAXES FOR A NOISE CONTROL PROGRAM		7

③

21. If there were a noise control program funded by your community, which of the following suggestions would you support for community noise control? Please answer "Yes" or "No" after each suggestion is described.

READ (a–h). CODE IN APPROPRIATE COLUMN.

Would you support:	YES	NO	DO NOT READ DON'T KNOW
a. Making Noise Sources Quieter – for example, equipment manufacturers would be required to supply quieter products if economically possible.	[✓ 1]	0	8
b. Community Planning and Zoning – for example, industries or highways producing excessive noise would not be allowed to locate near residential areas.	1	[✓ 0]	8
c. Building Codes – for example, new buildings would have to be constructed to reduce interior noise levels.	[✓ 1]	0	8
d. Curfews – for example, work on a construction site would not be permitted in the nighttime or very early morning hours.	1	[✓ 0]	8
e. Fines for Making Too Much Noise – for example, people with automobiles and other vehicles having noisy mufflers would be fined.	[✓ 1]	0	8
f. Barriers – for example, barriers might be installed between a highway and densely-populated areas.	1	[✓ 0]	8
g. Traffic Planning – for example, traffic would be re-routed away from residential areas.	[✓ 1]	0	8
h. Public Information Campaign – for example, a program to inform citizens about noise control would be started.	[✓ 1]	0	8

Q21:

	Column	Code
a:	44	/
b:	45	0
c:	46	/
d:	47	0
e:	48	/
f:	49	0
g:	50	/
h:	51	/

END CARD 3

Now, I'd like to ask you a few final questions about your background.

2. What was the month and year of your birth?

MONTH: October YEAR: 1940

3. What was the highest grade in school you completed and received credit for? CIRCLE ONE.

00 01 02 03 04 05 06 07 08 09 10 11 12

COLLEGE/OTHER POST HIGH SCHOOL SCHOOLING: [✓ 13] 14 15 16

POST GRADUATE SCHOOL: 17 18 19 20 OR MORE

Have you ever worked?

NO	SKIP TO Q26	80
YES	ASK A.	[✓ X]

A. Please turn to card #24. What is your present employment status?

WORKING FULL-TIME	[✓ 01]
WORKING PART-TIME	02
UNEMPLOYED	03
RETIRED	04
KEEPING HOUSE	05
IN SCHOOL	06
SOMETHING ELSE	07

SPECIFY: __________

CONTINUE WITH Q25, Q25A

④

START CARD 4

ID#

1	2	3	4	5
0	6	8	0	3

	6	7
CARD:	0	4

	8	9
Q22:	3	8

	10	11
Q23:	1	3

	12	13
Q24A:	0	1

④

25. What kind of work do (did) you do? What is (was) your main occupation?

(EXAMPLES: ELECTRICAL ENGINEER, SHOE CLERK, JANITOR, TEACHER)

Insurance Agent

Q25:

Q25A:

14	15
0	5

25A. What kind of business, industry, or organization is (was) that in? What do (did) they do or make?

(EXAMPLES: TV MANUFACTURER, RETAIL SHOE STORE, STATE LABOR DEPARTMENT)

Is (was) it wholesale, retail, manufacturing, or what?

Life Insurance Company. It's part of a large national company.

④

26. Please turn to card #26. Now, thinking of your entire family, all those related to you in this household, look at the card and tell me the letter of the income group that includes the total income for your family, from all sources, before taxes for last year. Please include your (and your spouse's) income. Do not include unrelated people.

IF UNCERTAIN, ASK: What would be your best guess?

AFTER INITIAL RESPONSE, ASK: Does that include everyone in your family who lives here? Is that before taxes or any deductions?

A.	01
B.	02
C.	03
D.	04
E.	05
F.	06
G.	07
H.	[✓ 08]
I.	09
J.	10
DON'T KNOW	98
REFUSED	99

Q26:

16	17
0	8

④

27. Please turn to card #27. Tell me which one of these best describes your racial background or heritage?

IF R CHOOSES MORE THAN ONE, PROBE FOR MAIN ONE.

a.	WHITE/ANGLO/EUROPEAN	[✓ 1]
b.	BLACK/NEGRO/AFRO-AMERICAN	2
c.	HISPANIC/LATIN AMERICAN/ SPANISH-PORTUGUESE HERITAGE	3
d.	ASIAN/PACIFIC ISLANDER/ ASIAN-AMERICAN	4
e.	NATIVE AMERICAN/AMERICAN INDIAN/ ALASKAN NATIVE	5
f.	MIDDLE EASTERN/ARAB/NORTH AFRICAN	6
g.	OTHER	7

SPECIFY: ____________________

Q27:

18

/

(4)

28. Please turn to card #28. Do you (or does your family) own this house (apartment)? Do you pay rent, or what?

HOUSE OWNED BY ME OR MY FAMILY (OR BEING BOUGHT NOW) . . . . [✓ 4]
APARTMENT OR CONDOMINIUM OWNED BY ME OR MY FAMILY (OR BEING BOUGHT NOW) 3
HOUSE OR APARTMENT RENTED 2
NEITHER OWN RESIDENCE NOR PAY RENT 1

Q28:

19
4

29. Including yourself, and including all children, how many people usually live in this house (apartment)?

RECORD #: 3

Q29:

20	21
0	3

So my supervisor can verify that I completed this interview, please tell me your name and your phone number:

Name: Jim Benson

Telephone Number: 664-1204

I would like to thank you on behalf of (NAME OF SPONSORING ORGANIZATION) for taking the trouble to provide us some very valuable information.

****

END OF INTERVIEW

****

④

A. TIME INTERVIEW ENDED: 12^{50} AM [✓ PM]

B. TIME INTERVIEW BEGAN: 12^{15} AM [✓ PM]
(Refer to page vii)

C. INTERRUPTION: # OF MINUTES: 3

TOTAL # OF MINUTES: 32
(= A - B - C)

22

TIME: 3 | 0

CONFIDENTIAL

FILL IN THE FOLLOWING ITEMS IMMEDIATELY AFTER LEAVING RESPONDENT'S HOME:

B1. Respondent Was:
- Male . . . . [✓ 1]
- Female 2

24 B1: /

B2. Building Capacity:
- A One-Family House Detached from Any Other House . . . . . . [✓ 1]
- A One-Family House Attached to One or More Houses 2
- A Building for Two Families or Duplex 3
- A Building for Three or Four Families 4
- A Building for Five to Nine Families 5
- A Building for 10 to 19 Families 6
- A Building for 20 or More Families 7
- A Mobile Home or Trailer 8
- Other 9
  - SPECIFY: ____________

25 B2: /

B3. Building Orientation:

Estimate Distance from Dwelling to Street (in feet): 25 Feet

26 27 B3: 0 | 2

B4. Construction Type:
- Masonry . . . . [✓ 1]
- Wood Frame 2

29 B4: /

B5. Sex of Interviewer:
- Male . . . . [✓ 1]
- Female 2

30 B5: /

B6. Language of Interview:
- English . . . . [✓ 1]
- Spanish 2
- Other 3
  - SPECIFY: ____________

31 B6: /

END CARD 4

Example 2

COMMUNITY ENVIRONMENT QUESTIONNAIRE

Table 01

If the # of Adults is:	[✓ 1]	2	3	4	5	6 or more
Then Select Adult #:	[✓ 1]	1	1	1	1	1

NZ 08
AR 3
CL 005
CTY 016

Address 1103 KINGSLEY DRIVE
City/Community WESTPORT
Respondent # 005-04

Call Record Sheet

1st Interviewer EVE FIELDER ID# 14 # Calls 1
2nd Interviewer NED LEVINE ID# 20 # Calls 1

DATE	DAY OF WEEK	TIME	RESULT (CODE EVERY CALL)
1) 6/5/78	Monday	3^{00} am [✓ pm]	82
2) 6/9/78	Friday	2^{00} am [✓ pm]	App't made by phone responding to letter sent 03
3) 6/10/78	Saturday	1^{00} am [✓ pm]	90
4)		am pm	
5)		am pm	

RESULT:

- no one home/no answer – 01
- respondent not at home – 02
- appointment made – 03 – WRITE TIME/DATE
- Initial contact busy – no appointment – 04
- respondent busy – no appointment – 05
- Initial contact ill – no appointment – 06
- respondent ill – no appointment – 07
- appt. cancelled by initial contact – 08
- appt. cancelled by respondent – 09
- non-interview – 82
- completed an appointment – 90
- completed no appointment – 91

	DATE	INITIAL
LOGGED OUT	6/1	PB
LOGGED IN/TO EDITING	6/12	PB
EDITING COMPLETE	6/13	CR
SELECTED FOR VALIDATION	—	
VALIDATION COMPLETE	—	

	DATE	INITIAL
LOGGED BY CODING	6/14	H I
CLOSED-ENDED CODING COMPLETE	6/15	MR
QUALITY CONTROL OF CLOSED-ENDED CODING	6/15	PB
OPEN-ENDED CODING COMPLETE	6/16	TM
QUALITY CONTROL OF OPEN-ENDED CODING	6/16	PB

Letter sent on 6/6 PB

	DATE	INITIAL
FINAL CHECK	7/1	PB

(1)

START CARD 1

ID# (1 2 3 4 5): 0 0 5 0 4
CARD: (6 7): 0 1
NZ: (8 9): 0 8
AR: (10): 3
CL: (11 12 13): 0 0 5
CTY: (14 15 16): 0 1 6
SELECTION LABEL #: (17 18): 0 1
CALLS: (19): 3
INTERVIEW DATE: (20 21): 4 4

①

II

CONFIDENTIAL

FOR NON-INTERVIEWS ONLY

FIRST INTERVIEWER

A.

Vacant 01
Address not a dwelling 02
No such address 03
No one at home, final call . . 04
Respondent not at home, final call . 05
Language barrier 06
(What language? ______)
Secure residence 07
Secure apartment building . . . 08
Manager refuses 09
Initial contact incapable . . . 10
WHY?: ______

Initial contact refused . . . [✓ 20]
WHY?: She's an older lady. I think she was frightened!

Respondent incapable 30
WHY?: ______

Respondent refused 40
VERBATIM: ______

Refused to open door 50
COMMENTS: ______

Other 60
SPECIFY: ______

SECOND INTERVIEWER

E.

Vacant 01
Address not a dwelling . . . 02
No such address 03
No one at home, final call . . 04
Respondent not at home, final call 05
Language barrier 06
(What language? ______)
Secure residence 07
Secure apartment building . . 08
Manager refuses 09
Initial contact incapable . . 10
WHY?: ______

Initial contact refused . . . 20
WHY?: ______

Respondent incapable . . . 30
WHY?: ______

Respondent refused. . . . 40
VERBATIM: ______

Refused to open door . . . 50
COMMENTS: ______

Other 60
SPECIFY: ______

①

III

CONFIDENTIAL

FOR NON-INTERVIEWS ONLY

FIRST INTERVIEWER

B. REFUSER

Black, non-Spanish surname . . [✓ 1]
Spanish surname 2
Oriental 3
White, non-Spanish surname (not Oriental) 4
Other 5
SPECIFY: ______________________

C. REFUSER

Male 1
Female . . . . [✓ 2]

D. AGE ESTIMATE OF REFUSER 65-70

COMMENTS: ______________________

SECOND INTERVIEWER

F. REFUSER

Black, non-Spanish surname. . 1
Spanish surname 2
Oriental 3
White, non-Spanish surname (not Oriental) 4
Other 5
SPECIFY: ______________________

G. REFUSER

Male 1
Female 2

H. AGE ESTIMATE OF REFUSER ______________

COMMENTS: ______________________

THIS PAGE INTENTIONALLY LEFT BLANK

①

A1. RESPONDENT ID # 005-04

A2. INTERVIEWER: Ned Levine ID # 20

DOORSTEP INTRODUCTION (IN YOUR OWN WORDS)

Good Morning/Afternoon/Evening. I'm (........), a representative of (........ YOUR ORGANIZATION). (SHOW IDENTIFICATION)

We're taking a public opinion study in this area concerning the environment and its impact upon the community. Your house has been selected at random from among those around here. By interviewing select individuals, we can be sure we have scientifically represented the attitudes and opinions of the community. The more people who cooperate, the more successful we can be in representing all the people in this city.

I'd like to take a few minutes of your time and ask you a few questions. On the basis of these questions, a respondent will be scientifically selected to be interviewed. The actual interview will then take approximately 20 to 30 minutes. We feel that you will find our questions interesting. Everything you tell us will be strictly confidential. Your name will not be connected in any way with the findings of this very important study. This interview will be combined with others in the sample to give information about the community as a whole.

In this way, valuable information about the environment will be gathered which will help improve the quality of future city planning.

①

ROSTER FOR RESPONDENT SELECTION

I would like to make a list of the persons 18 years or over who live here as permanent members of your household. This will tell me which adult I am to interview.

A3. Starting with the oldest male, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT MALES HAVE BEEN LISTED.)

Now, taking the oldest female, age 18 and over, please give me their first names. (CONTINUE WITH THE NEXT OLDEST, ETC., UNTIL ALL ADULT FEMALES HAVE BEEN LISTED.)

COMPLETE COLUMNS B-D FOR EACH MENTION. IN COLUMN E, STARTING WITH THE FIRST PERSON LISTED, NUMBER ALL THOSE LISTED IN CONSECUTIVE ORDER (1,2,3,...ETC.). LOOK AT SELECTION TABLE ON FIRST PAGE TO DETERMINE WHICH NUMBER PERSON IS THE RESPONDENT. CIRCLE THE RESPONDENT'S NUMBER IN COLUMN E.

A First Name	B Is this (...)'s Permanent Residence?		C Sex		D Age on Last Birthday	E Number and Circle # Selected
	Yes	No	Male	Female		
1) agnes	[✓ 1]	2	1	[✓ 2]	67	[✓ 1]
2)	1	2	1	2		
3)	1	2	1	2		
4)	1	2	1	2		
5)	1	2	1	2		
6)	1	2	1	2		
7)	1	2	1	2		
8)	1	2	1	2		

IF NOT PERMANENT RESIDENCE, REMOVE (...) FROM ROSTER. RELIST MEMBERS IN ORDER (DO NOT SKIP A LINE NUMBER).

IF NO ONE IS A PERMANENT RESIDENT AT THIS ADDRESS, HOUSEHOLD BECOMES UNQUALIFIED.

TOTAL # ON LIST: 22 [1]

FOR R ONLY

R # ON LIST: 23 [1]

SEX OF R: 24 [2]

AGE OF R: 25 26 [6 | 7]

END CARD 1

(YOU WILL NOW KNOW WHICH ADULT IN THE HOUSEHOLD YOU ARE TO INTERVIEW. IF THAT PERSON TO BE INTERVIEWED IS THE SAME PERSON AS THE "INITIAL CONTACT" YOU ARE ALREADY TALKING TO, ASK QUESTION A4. IF IT IS NOT THE SAME PERSON, ASK QUESTION A5.)

A4. **In checking my sampling table, I see that you are the person I am supposed to interview in this household.**

GO TO PAGE 1 AND START QUESTION 1.

A5. **In checking my sample table, I see that I must interview (.....), who is (male/female), and who is (AGE). Is (he/she) available now to be interviewed?**

(IF RESPONDENT IS AVAILABLE, MEET THE PERSON AND REPEAT INTRODUCTION ON PAGE iv.) IF NOT AVAILABLE, DETERMINE BEST TIME TO MEET WITH RESPONDENT.

You have been selected from a sampling table to be interviewed.

GO TO PAGE 1 AND START QUESTION 1.

A6. TIME BEGINNING: 1$^{\underline{10}}$ AM [✓ PM]

1. How long have you lived in this area at your present address or within a few blocks of this address?

ENTER ACTUAL NUMBER OF YEARS, ROUNDED TO NEAREST YEAR (1/2-YEAR OR MORE ROUNDED UP). IF "ALL MY LIFE" OR "LESS THAN 6 MONTHS," CODE BELOW.

RECORD YEARS: ______

LESS THAN 6 MONTHS 95

ALL MY LIFE
(REGARDLESS OF HOW LONG). . . . . . . [✓ 90]

2. How would you rate the area in which you live? Would you say it was:

Very Good, ... 5
Good, ... 4
Fair, ... [✓ 3]
Poor, or 2
Very Poor? 1

3. Now, thinking of your area, what three things do you particularly like about this area; that is, within a few blocks of here?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION I can use the buses to get around.
2nd MENTION The stores are close by
3rd MENTION ______

4. What are the three most important problems facing the residents of your area today?

PROBE FOR THREE MENTIONS. LIST IN ORDER OF MENTION.

1st MENTION There are too many burglaries
2nd MENTION The streets aren't kept up.
3rd MENTION The airplanes make too much noise.

②

START CARD 2

ID#

1	2	3	4
0	0	5	0

CARD: 6 7 — 0 2

Q1: 8 9 — 9 0

Q2: 10 — 3

Q3:
1st: 11 12 — 0 3
2nd: 13 14 — 0 2
3rd: 15 16 — 0 0

Q4:
1st: 17 18 — 1 0
2nd: 20 21 — 2 0
3rd: 23 24 — 3 0

②

5. As I read the following list, would you tell me whether any of these are problems here in this area? Please answer "Yes" or "No".

READ (a-h). CIRCLE APPROPRIATE CODE IN COLUMN A.

(We will be using cards to identify your answers to various questions. Each card is numbered at the top right-hand corner. Please do not turn the cards until I tell you to do so.)

FOR EACH "YES" IN COLUMN A, ASK: Please turn to Card #5. How severe a problem is (...)? INSERT EACH PROBLEM WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Would you say that (...) is a Problem?	YES	NO	EXTREMELY SEVERE	QUITE SEVERE	MODERATELY SEVERE	NOT VERY SEVERE	DON'T KNOW
a. Traffic Congestion?	[✓ Y]	N	5	[✓ 4]	3	2	8
b. Polluted Water?	Y	[✓ N]	5	4	3	2	8
c. Noise?	[✓ Y]	N	5	[✓ 4]	3	2	8
d. Crime?	[✓ Y]	N	[✓ 5]	4	3	2	8
e. Run-Down Areas in Need of Improvement?	[✓ Y]	N	5	4	[✓ 3]	2	8
f. Unclean Air?	Y	[✓ N]	5	4	3	2	8
g. Parking?	[✓ Y]	N	5	4	[✓ 3]	2	8
h. Inadequate Low-Income Housing?	[✓ Y]	N	5	4	3	[✓ 2]	8

Q5:

a:	26	4
b:	27	1
c:	28	4
d:	29	5
e:	30	3
f:	31	1
g:	32	3
h:	33	2

②

6. Please look at card #6. As I read the following, please tell me how you would rate each of the local public services in this area?

READ (a-k). CIRCLE APPROPRIATE CODE.

How Would You Rate:	VERY GOOD	GOOD	FAIR	POOR	VERY POOR	DON'T KNOW/ DOESN'T APPLY
a. Quality of Schools?	5	4	3	2	1	[✓ 8]
b. Police Protection?	5	4	[✓ 3]	2	1	8
c. Fire Protection?	5	[✓ 4]	3	2	1	8
d. Recreation Facilities?	5	4	3	2	1	[✓ 8]
e. Garbage Collection?	5	[✓ 4]	3	2	1	8
f. Hospitals and Health Facilities?	5	4	[✓ 3]	2	1	8
g. Public Transportation?	5	[✓ 4]	3	2	1	8
h. Street Maintenance?	5	4	3	[✓ 2]	1	8
i. Sewage and Drainage?	5	4	3	2	1	8
j. General Pollution Control?	5	4	3	2	1	[✓ 8]
k. Noise Control?	5	4	3	2	1	[✓ 8]

IPPED
ESTION
DITION

I'd like to ask you a question about your health. This will allow us to better understand your answers to the remaining questions.

7. How would you rate your health overall? Would you say that your health is:

Very Good, ... 5
Good, ... 4
Average, ... [✓ 3]
Poor, or 2
Very Poor? 1

Q6:

a:	34	8
b:	35	3
c:	36	4
d:	37	8
e:	38	4
f:	39	3
g:	40	4
h:	41	2
i:	42	9
j:	43	8
k:	44	8

Q7:

	45	3

②

Now, in the following questions I will be asking you about the quietness of this area; that is, within a few blocks or so.

8. Please turn to card #8. Looking at the card, please tell me how quiet or noisy you consider this area to be?

Q8:
46
1

VERY QUIET 4
QUIET 3
NOISY 2
VERY NOISY . . . . [✓ 1]

Please turn to card #9. As you can see at the top of this card, we have defined the word annoyed as meaning: to be disturbed, stressed, or upset by the repeated occurrence of noise. There is then a scale of annoyance, showing the amount of annoyance from Most to Least.

9. Now, using this card, please tell me which one of these best describes how annoyed you are by noise in this area?

Q9:
47
2

TREMENDOUSLY ANNOYED 1
HIGHLY ANNOYED . . . . [✓ 2]
CONSIDERABLY ANNOYED 3
MEDIUM ANNOYED 4
PARTIALLY ANNOYED. 5
A LITTLE ANNOYED 6
NOT AT ALL ANNOYED 7

②

10. Does noise interfere with any of the following activities? Please answer "Yes" or "No." READ (a-d). CIRCLE APPROPRIATE CODE IN COLUMN A.

FOR EACH "YES," READ ACTIVITY AND ASK: Please turn to card #10. How often does it interfere with (...)? INSERT EACH ACTIVITY WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Does Noise Interfere with:	YES	NO	ALWAYS INTERFERES	FREQUENTLY INTERFERES	SOMETIMES INTERFERES	RARELY INTERFERES	DON'T KNOW
a. Sleeping?	[✓ Y]	N	5	[✓ 4]	3	2	8
b. Talking or Listening to the Radio, Watching TV, etc?	Y	[✓ N]	5	4	3	2	8
c. Reading?	[✓ Y]	N	5	4	[✓ 3]	2	8
d. Resting?	[✓ Y]	N	5	4	3	[✓ 2]	8

Q10:

a:	48	4
b:	49	1
c:	50	3
d:	51	2

11. Please turn to card #11. During which of these time periods does noise annoy you most? CIRCLE ALL MENTIONS.

a.	MORNING (7AM TO NOON)	1
b.	AFTERNOON (NOON TO 6PM)	1
c.	EVENING (6PM TO 10PM)	1
d.	NIGHTTIME (10PM TO 7AM)	1
e.	ALL THE TIME	[✓ 1]
f.	NOISE NEVER ANNOYS ME	1

Q11:

a:	52	0
b:	53	0
c:	54	0
d:	55	0
e:	56	1
f:	57	0

②

12. Generally speaking, do you think noise affects your physical or emotional health and well-being?

YES 3
NO 1
MAYBE . . . . [✓ .2]

Q12: 58 2

13. Does noise affect your health in any of the following ways? Please answer "Yes" or "No." READ (a-e). CIRCLE APPROPRIATE CODE IN COLUMN A.

FOR EACH "YES," READ SYMPTOM AND ASK: Please turn to card #13. How often does noise cause (...)? INSERT EACH SYMPTOM WITH "YES" ANSWER. CIRCLE APPROPRIATE CODE IN COLUMN B.

	A		B				
Does Noise Cause:	YES	NO	ALL THE TIME	FREQUENTLY	SOMETIMES	RARELY	DON'T KNOW
a. Headaches?	Y	[✓ N]	5	4	3	2	8
b. Tiredness?	Y	[✓ N]	5	4	3	2	8
c. Irritability?	Y	[✓ N]	5	4	3	2	8
d. Hearing Loss or Difficulties?	Y	N	5	4	3	2	[✓ 8]
e. An Existing Health Problem to Get Worse?	[✓ Y]	N	5	4	[✓ 3]	2	8

Q13:
59 a: /
60 b: /
61 c: /
62 d: 8
63 e: 3

14. Please turn to card #14. To what extent have you become accustomed to noise?

HIGHLY ACCUSTOMED 5
QUITE ACCUSTOMED 4
MEDIUM ACCUSTOMED . . . . . . [✓ .3]
NOT VERY ACCUSTOMED 2
NOT AT ALL ACCUSTOMED 1

Q14: 64 3

②

15. Please turn to card #15. To reduce noise in your home, have you or any member of your household taken any of these actions?

CIRCLE ALL MENTIONS.

a. USE INSULATION OR SOUNDPROOFING 1

b. CLOSE DOORS OR WINDOWS . . . . [✓ 1]

c. TURN-ON OR TURN-UP RADIO, TV, OR STEREO TO MASK NOISE . . . . [✓ 1]

d. WEAR EARPLUGS 1

e. CHANGE LOCATION OF SLEEPING QUARTERS . . . [✓ 1]

f. CONSIDERED MOVING . . . . [✓ 1]

g. NONE OF THESE 1

16. Please tell me whether you or any member of your household have done any of these things to help reduce noise in this area? Please answer "Yes" or "no."

	YES	NO
a. Complaining to a Neighbor About Making Too Much Noise?	[✓ 1]	0
b. Writing, Telephoning, or Visiting an Official?	[✓ 1]	0
c. Initiating Legal Action?	1	[✓ 0]

Q15:

a:	65	0
b:	66	/
c:	67	/
d:	68	0
e:	69	/
f:	70	/
g:	71	0

Q16:

a:	72	/
b:	73	/
c:	74	0

END CARD 2

Now I'd like to explore some specific noise sources that may or may not annoy you in this area.

17. Please turn to card #17. As I read the following list of noise sources, tell me how annoyed you are by each noise source in this area.

READ (a-u). CIRCLE APPROPRIATE CODE.

How Annoyed are You by Noise from (...)?	TREMENDOUSLY ANNOYED	HIGHLY ANNOYED	CONSIDERABLY ANNOYED	MEDIUM ANNOYED	PARTIALLY ANNOYED	A LITTLE ANNOYED	NOT AT ALL ANNOYED
a. Traffic?	1	[✓ 2]	3	4	5	6	7
b. Motorcycles?	1	2	3	[✓ 4]	5	6	7
c. Trucks?	1	2	[✓ 3]	4	5	6	7
d. Buses?	1	[✓ 2]	3	4	5	6	7
e. Automobiles?	1	2	3	[✓ 4]	5	6	7
f. Highways or Freeways?	1	2	[✓ 3]	4	5	6	7
g. Recreational Vehicles (e.g., Snowmobiles?)	1	2	3	4	5	6	[✓ 7]
h. Garbage Trucks?	1	2	3	[✓ 4]	5	6	7
i. Emergency Vehicles/ Sirens?	1	[✓ 2]	3	4	5	6	7
j. Entertainment Centers (e.g., clubs, movies, places that play live music)?	1	2	3	4	5	[✓ 6]	7
k. Pets/Animals?	1	[✓ 2]	3	4	5	6	7
l. Neighbors' Homes (e.g., noisy stereo, loud talking)?	1	[✓ 2]	3	4	5	6	7
m. Air Conditioners?	1	2	3	4	[✓ 5]	6	7
n. Lawnmowers/ Garden Equipment?	1	2	3	4	5	[✓ 6]	7
o. Jet Airplanes?	1	2	[✓ 3]	4	5	6	7

QUESTION 17 CONTINUES ON NEXT PAGE.

③

START CARD 3

ID#

1	2	3	4	5
0	0	5	0	

CARD:

6	7
0	3

Q17:

	Column	Code
a:	8	2
b:	9	4
c:	10	3
d:	11	2
e:	12	4
f:	13	3
g:	14	7
h:	15	4
i:	16	2
j:	17	6
k:	18	2
l:	19	2
m:	20	5
n:	21	6
o:	22	3

③

17. (Continued)

How Annoyed are You by Noise from (...)?	TREMENDOUSLY ANNOYED	HIGHLY ANNOYED	CONSIDERABLY ANNOYED	MEDIUM ANNOYED	PARTIALLY ANNOYED	A LITTLE ANNOYED	NOT AT ALL ANNOYED
p. Small Airplanes?	1	2	3	4	[✓ 5]	6	7
q. Helicopters?	1	2	3	[✓ 4]	5	6	7
r. Trains?	1	2	3	4	5	6	[✓ 7]
s. Construction Noise?	1	2	3	4	[✓ 5]	6	7
t. Commercial or Industrial Equipment?	1	2	3	4	5	6	[✓ 7]

u. What Other Noise Sources Annoy You?

– NONE –
First Mention

Second Mention

Q17:

p:	23	5
q:	24	4
r:	25	7
s:	26	5
t:	27	7
u:		
1st:	28 29	0 0
2nd:	30 31	0 0

Interviewer Skipped Page - Editor

③

Now I'd like to ask you some questions about reducing noise in this area.

18. Please turn to card #18. Which of the following should be responsible for reducing noise in this area?

CIRCLE ALL MENTIONS.

a.	MANUFACTURER	1
b.	OPERATOR/OWNER	1
c.	LOCAL GOVERNMENT (includes police, local noise control office, any other local administrative office)	1
d.	STATE GOVERNMENT	1
e.	FEDERAL GOVERNMENT	1
f.	NONE	1

Q18:

a:	32	9
b:	33	9
c:	34	9
d:	35	9
e:	36	9
f:	37	9

19. Do you think this community should have a noise control program to specifically work on reducing noise levels? This program would be funded by the community.

YES	SKIP TO Q20	2
NO	ASK Q19A	1

Q19: 38 9

19A. Please turn to card #19. Why do you feel that there should not be a noise control program in this community?

CIRCLE APPROPRIATE CODE.

		MENTIONED	NOT MENTIONED
a.	I DON'T THINK ANYTHING CAN BE DONE	1	2
b.	I DON'T CARE; I'M NOT BOTHERED ENOUGH	1	2
c.	IT IS NOT THE RESPONSIBILITY OF THE COMMUNITY	1	2
d.	IT IS TOO COSTLY	1	2

Q19A:

a:	39	9
b:	40	9
c:	41	9
d:	42	9

(TO PRECEDE Q20):

NOT TO BE INCLUDED IN PRINTED QUESTIONNAIRE

NOTE TO RESEARCHERS: FOR Q20, YOU MUST TYPE THE ACTUAL COST TO YOUR CITY IN THE APPROPRIATE SPACE. FOR a. YOU MULTIPLY $0.10 TIMES THE POPULATION SIZE OF YOUR CITY. FOR b. YOU MULTIPLY $0.25 TIMES THE POPULATION SIZE OF YOUR CITY. FOR c. YOU MULTIPLY $0.50 TIMES THE POPULATION SIZE OF YOUR CITY. FOR d. YOU MULTIPLY $1.00 TIMES THE POPULATION SIZE OF YOUR CITY. FOR e. YOU MULTIPLY $2.50 TIMES THE POPULATION SIZE OF YOUR CITY. FOR f. YOU TAKE THE FIGURE FOR e. AND TYPE IT AFTER "MORE THAN________."

③

0. Please turn to card #20. Keeping in mind your present level of taxes, how much in additional taxes would you be willing to pay on a yearly basis for a noise control program?

This card shows how much it will cost your city as a whole and how much it will cost each Individual in the city.

How much would you be willing to pay in additional taxes for a noise control program?

Q20:

43 $\boxed{3}$

ADDITIONAL TAXES

COST TO CITY	COST TO INDIVIDUAL	
	(OR APPROXIMATELY 10¢ FOR EACH INDIVIDUAL A YEAR) . .	1
	(OR APPROXIMATELY 25¢ FOR EACH INDIVIDUAL A YEAR) . .	2
	(OR APPROXIMATELY 50¢ FOR EACH INDIVIDUAL A YEAR) .	[✓ 3]
	(OR APPROXIMATELY $1.00 FOR EACH INDIVIDUAL A YEAR) .	4
	(OR APPROXIMATELY $2.50 FOR EACH INDIVIDUAL A YEAR) .	5
MORE THAN ____________	(OR MORE THAN $2.50 FOR EACH INDIVIDUAL A YEAR) . .	6

I WOULD NOT PAY ANY EXTRA TAXES FOR A NOISE CONTROL PROGRAM 7

③

21. If there were a noise control program funded by your community, which of the following suggestions would you support for community noise control? Please answer "Yes" or "No" after each suggestion is described.

READ (a-h). CODE IN APPROPRIATE COLUMN.

Would you support:	YES	NO	DO NOT READ DON'T KNOW
a. Making Noise Sources Quieter — for example, equipment manufacturers would be required to supply quieter products if economically possible.	[✓ 1]	0	8
b. Community Planning and Zoning — for example, industries or highways producing excessive noise would not be allowed to locate near residential areas.	1	0	[✓ 8]
c. Building Codes — for example, new buildings would have to be constructed to reduce interior noise levels.	[✓ 1]	0	8
d. Curfews — for example, work on a construction site would not be permitted in the nighttime or very early morning hours.	[✓ 1]	0	8
e. Fines for Making Too Much Noise — for example, people with automobiles and other vehicles having noisy mufflers would be fined.	[✓ 1]	0	8
f. Barriers — for example, barriers might be installed between a highway and densely-populated areas.	1	0	[✓ 8]
g. Traffic Planning — for example, traffic would be re-routed away from residential areas.	[✓ 1]	0	8
h. Public Information Campaign — for example, a program to inform citizens about noise control would be started.	[✓ 1]	0	8

Q21:

a:	44	1
b:	45	8
c:	46	1
d:	47	1
e:	48	1
f:	49	8
g:	50	1
h:	51	1

END CARD 3

Now, I'd like to ask you a few final questions about your background.

22. What was the month and year of your birth?

MONTH: February YEAR: 1911

23. What was the highest grade in school you completed and received credit for?
CIRCLE ONE.

00 01 02 03 04 05 06 07 08 09 10 11 [✓ 12]

COLLEGE/OTHER POST HIGH SCHOOL SCHOOLING: 13 14 15 16

POST GRADUATE SCHOOL: 17 18 19 20 OR MORE

24. Have you ever worked?

NO . . . . SKIP TO Q26 80
YES . . . . ASK A. . . . . [✓ X]

A. Please turn to card #24. What is your present employment status?

WORKING FULL-TIME 01
WORKING PART-TIME 02
UNEMPLOYED 03
RETIRED . . . . [✓ 04]
KEEPING HOUSE 05
IN SCHOOL 06
SOMETHING ELSE 07

SPECIFY: ____________

CONTINUE WITH Q25, Q25A

④

START CARD 4

ID#
1 2 3 4 5: 0 0 5 0 4

6 7
CARD: 0 4

8 9
Q22: 6 7

10 11
Q23: 1 2

12 13
Q24A: 0 4

④

25. What kind of work do (did) you do? What is (was) your main occupation?

(EXAMPLES: ELECTRICAL ENGINEER, SHOE CLERK, JANITOR, TEACHER)

Postal worker in local post office. I sorted the mail and waited on people.

Q25:
Q25A:

14	15
0	6

25A. What kind of business, industry, or organization is (was) that in? What do (did) they do or make?

(EXAMPLES: TV MANUFACTURER, RETAIL SHOE STORE, STATE LABOR DEPARTMENT)

Is (was) it wholesale, retail, manufacturing, or what?

For the Federal Government

④

26. Please turn to card #26. Now, thinking of your entire family, all those related to you in this household, look at the card and tell me the letter of the income group that includes the total income for your family, from all sources, before taxes for last year. Please include your (and your spouse's) income. Do not include unrelated people.

IF UNCERTAIN, ASK: What would be your best guess?

AFTER INITIAL RESPONSE, ASK: Does that include everyone in your family who lives here? Is that before taxes or any deductions?

A.	01
B.	02
C.	03
D.	04
E.	05
F.	06
G.	07
H.	08
I.	09
J.	10
DON'T KNOW	98
REFUSED	[✓ 99]

Q26:

16	17
9	9

Refused to Answer

"I don't think I should tell you. You might be from the tax office."

Me: "I guarantee this information will be confidential."

- Still - I'd rather not."

④

27. Please turn to card #27. Tell me which one of these best describes your racial background or heritage?

IF R CHOOSES MORE THAN ONE, PROBE FOR MAIN ONE.

a. WHITE/ANGLO/EUROPEAN 1

b. BLACK/NEGRO/AFRO-AMERICAN . . . . [✓ 2]

c. HISPANIC/LATIN AMERICAN/
SPANISH-PORTUGUESE HERITAGE 3

d. ASIAN/PACIFIC ISLANDER/
ASIAN-AMERICAN 4

e. NATIVE AMERICAN/AMERICAN INDIAN/
ALASKAN NATIVE 5

f. MIDDLE EASTERN/ARAB/NORTH AFRICAN 6

g. OTHER 7
SPECIFY: ______________________

Q27:

18

2

④

28. Please turn to card #28. Do you (or does your family) own this house (apartment)? Do you pay rent, or what?

HOUSE OWNED BY ME OR MY FAMILY (OR BEING BOUGHT NOW) 4

APARTMENT OR CONDOMINIUM OWNED BY ME OR MY FAMILY (OR BEING BOUGHT NOW) 3

HOUSE OR APARTMENT RENTED . . . . [✓ 2]

NEITHER OWN RESIDENCE NOR PAY RENT 1

Q28:

19
2

29. Including yourself, and including all children, how many people usually live in this house (apartment)?

RECORD #: 1

Q29:

20	21
0	1

So my supervisor can verify that I completed this interview, please tell me your name and your phone number:

Name: Agnes Moore

Telephone Number: 926-3604

I would like to thank you on behalf of (NAME OF SPONSORING ORGANIZATION) for taking the trouble to provide us some very valuable information.

****

END OF INTERVIEW

****

B97
10

④

A. TIME INTERVIEW ENDED: 2⁰⁰ AM [✓ PM]

B. TIME INTERVIEW BEGAN: 1⁰⁰ AM [✓ PM]
(Refer to page vii)

C. INTERRUPTION: # OF MINUTES: 5

TOTAL # OF MINUTES: 45
(= A - B - C)

TIME: 22 23 | 4 | 5

CONFIDENTIAL

FILL IN THE FOLLOWING ITEMS
IMMEDIATELY AFTER LEAVING RESPONDENT'S HOME:

B1. Respondent Was:
- Male 1
- Female . . . . . [✓ 2]

B1: 24 | 2

B2. Building Capacity:
- A One-Family House Detached from Any Other House 1
- A One-Family House Attached to One or More Houses 2
- A Building for Two Families or Duplex 3
- A Building for Three or Four Families 4
- A Building for Five to Nine Families . . . . . [✓ 5]
- A Building for 10 to 19 Families 6
- A Building for 20 or More Families 7
- A Mobile Home or Trailer 8
- Other 9
  - SPECIFY: ____________

B2: 25 | 5

B3. Building Orientation:

Estimate Distance from Dwelling to Street (in feet): 45 Feet

B3: 26 27 28 | 0 | 4 |

B4. Construction Type:
- Masonry 1
- Wood Frame . . . . . [✓ 2]

B4: 29 | 2

B5. Sex of Interviewer:
- Male . . . . . [✓ 1]
- Female 2

B5: 30 | 1

B6. Language of Interview:
- English . . . . . [✓ 1]
- Spanish 2
- Other 3
  - SPECIFY: ____________

B6: 31 | 1

END CARD 4